

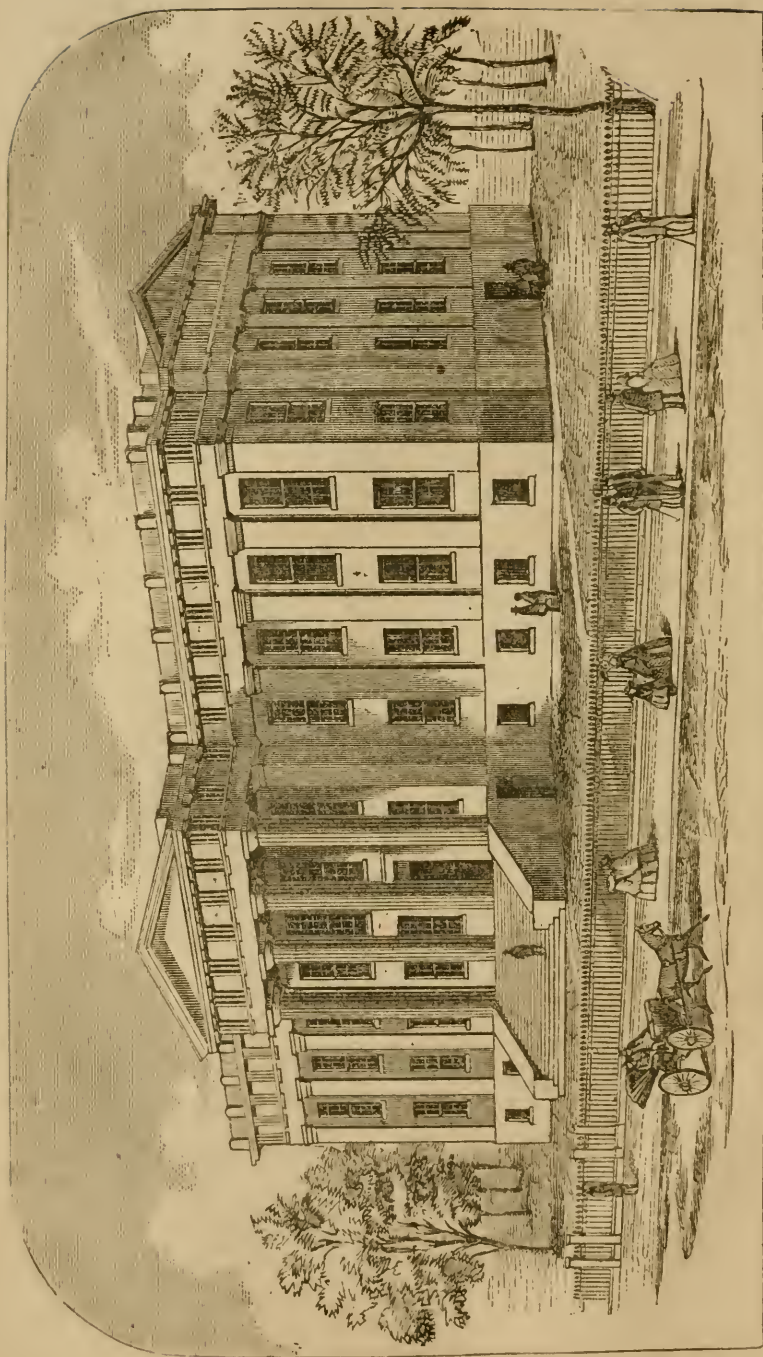
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COURT HOUSE, JEFFERSON STREET, BETWEEN FIFTH AND SIXTH.

LOUISVILLE:

HER

COMMERCIAL, MANUFACTURING

AND

SOCIAL ADVANTAGES.

INCLUDING A SKETCH OF HER

HISTORY, GEOGRAPHY, TOPOGRAPHY, SCHOOLS,
HEALTH, RAILROAD AND STEAMBOAT
FACILITIES, WATER POWER,
&c., &c., &c..

EXHIBITING HER ADVANTAGES AS A

GREAT MANUFACTURING AND COMMERCIAL CENTER.

ILLUSTRATED WITH

Engravings of several of her numerous Public Buildings, &c.

By RICHARD DEERING.



LOUISVILLE, KY:

HANNA & CO., PRINTERS, CORNER MAIN AND THIRD STREETS.

1859.

TO WILLIAM KENDRICK:
THE HONEST MAN, THE DEVOTED FRIEND,
THE ACCOMPLISHED GENTLEMAN, THE SINCERE CHRISTIAN,
AND THE PLEASANT AND PROMPT BUSINESS MAN,
THIS HUMBLE VOLUME
IS MOST RESPECTFULLY DEDICATED.
BY HIS OBLIGED AND GRATEFUL FRIEND,

THE AUTHOR.

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THE NEW ERA.

"How is it, sir, that this beautiful city is so little known?" Thus inquired an intelligent gentleman from a Northern State, of one of our citizens, recently. He was passing through Louisville on his way South, and from a glimpse at the beauty of the place, was induced to spend several days in looking at it more in detail. He walked our streets, surveyed the location and the improvements, and was struck, as every beholder must be, with the great beauty of the place, and expressed his admiration as above. His admiration was great, but his surprise that this "beautiful city is so little known," was greater. "How is it, sir?" said this gentleman. Had he known more of our citizens and of the policy they have pursued for many years past, he could himself have explained the puzzle. But he was not aware that, when he crossed the Ohio river, he left the land of *advertising* behind him. He was accustomed to see books, pamphlets, maps, cards, and descriptive plates, from every place of any note in the great West, setting forth their importance and their advantages, with care and minuteness; and naturally supposed, from the number and frequency of such publications, and the well established policy and importance of them, that every community and city that had any thing worth advertising, had advertised it. And yet, who ever saw such a book or pamphlet, in the hotels, depots, steamboats, and public places of the country, from any city of the Southwest, except St. Louis? The citizens of that fine, enterprising city, were the first in the Southwest to throw off the slumber and join in this characteristic of modern progress. The people of the Southwest seem to take it for granted, or as a matter of necessity, that this "advertising mania," as they call it, originates in an unscrupulous disposition to deceive, and hence do not adopt it. But notwithstanding this bad opinion of those who advertise, it is amusing to see how much time and pains the people of the Southwest bestow on maps and descriptive books from places where they have an inclination to invest their means. They examine the map to see what kind and what extent of country immediately surrounds the place, and also its relative position, whether favorable for trade, for manufacturing, and for commerce. They examine the description to find every fact that bears on or relates to the fortunes of the place. This is wise—just as wise as to go and look at a farm before we purchase it. Why then should we neglect to do for ourselves and our city, that which has been of so much advantage to other places, and which, despite our prejudices, we attach so much importance to!

Thousands, yea, millions of dollars, have been invested by Southern men in Northern cities—in lots and other property—to which their attention would never have been called, but for such publications. Vast sums of money are thus invested every year by our own citizens. That there is indiscriminate puffing in some instances, we may admit; but it does not follow that we are obliged to adopt such a course in publishing to the world advantages of which we are conscious, and which, if known, will bring good to ourselves and to those who read them.

Why our citizens have viewed the subject of advertising in the light they have, is not our province to determine; but believing as we do, that they are in error in regard to it, we have labored for years to induce them to change their policy. There is still more or less reluctance, but a very decided change has

come over them, and henceforth we expect to see a state of things altogether more favorable than any ever yet realized in the progress of our beautiful city.

The policy and the progress now so happily and so manifestly obtaining in the city, may, with great propriety, be regarded as the beginning of a new era in her history. Never before were there so many and striking evidences of progress, nor such prospects of permanent prosperity. This state of things has been brought about by several causes: as the concentration and accumulation of capital, the ease with which our city passed the late severe commercial crisis, and the completion, and near approach to completion, of several important public works, such as the Louisville and Lexington, the Jeffersonville and Indianapolis, the New Albany and Salem, the Louisville and Lebanon, the Louisville and Nashville, and the Louisville and Memphis Railroads, and the City Water Works. These Railroads and their vast connections are beginning to be powerfully felt in nearly every department of our business. But these effects, great as they are, do not equal what is to grow out of the change that has come over the people themselves. From a timid, backward, self-distrusting spirit, our citizens have waked up to a proper sense of their own power and capabilities. A far-seeing, public-spirited, and self-relying policy has taken possession of the popular mind, and this city is driving on toward a glorious destiny, with an unanimity, enterprise, and vigor, never seen here before. Hope has dawned in every breast.

Our citizens have been merchants, paying little attention to manufacturing, without which no city has or can be permanently prosperous. Now, however, every heart beats responsively to this great interest, and manufacturing establishments are springing up almost daily.

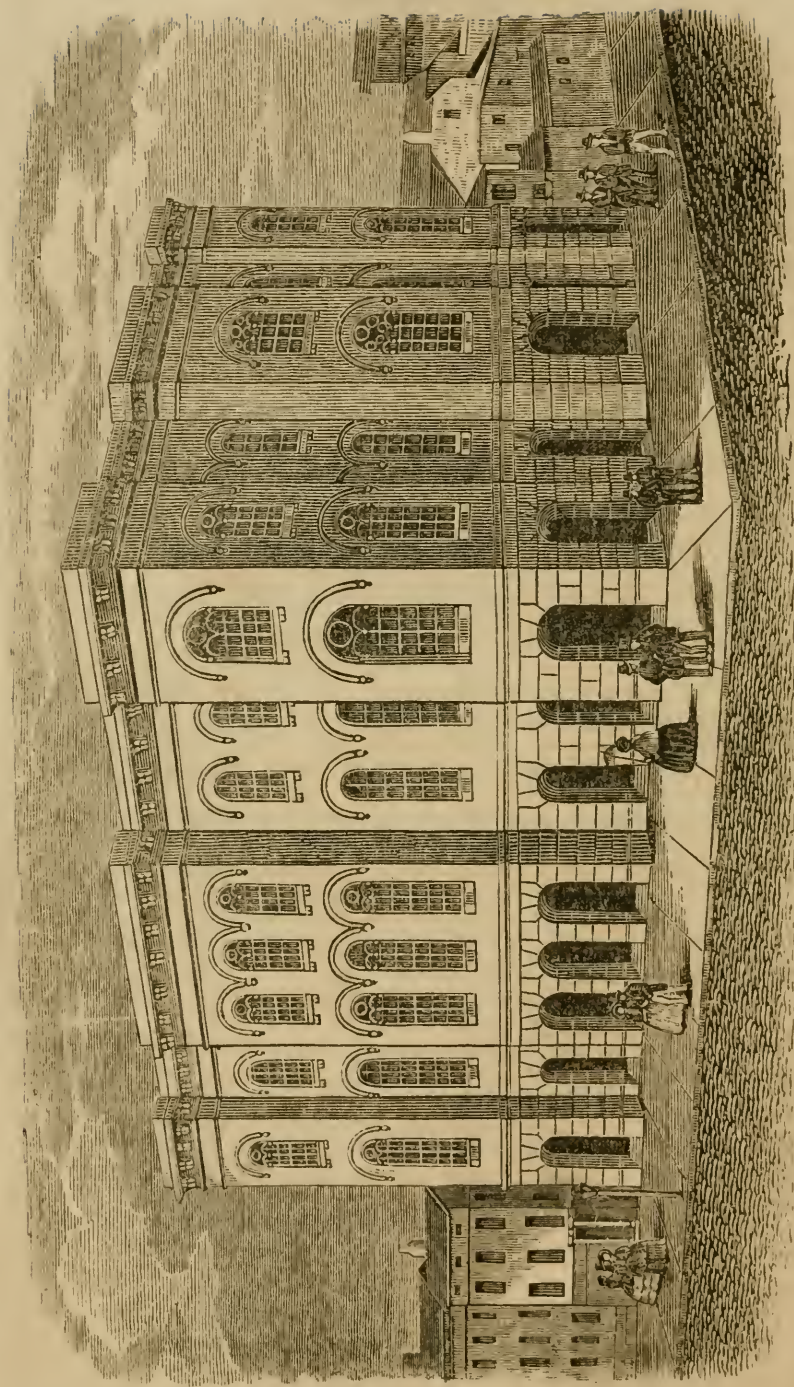
As evidence that our expectations, so confidently expressed above, that the future progress of the city will far exceed the past, and that the NEW ERA has already been inaugurated, we record the fact, that since this article was written (three weeks ago), two new Foundries, one Cotton Factory, two Breweries, and a large Furniture manufactory, have been commenced; and more dwelling houses are now in course of construction than at this period in any former season. New buildings are seen in every part of the city, many of them manufacturing establishments. A large number of our old manufacturing establishments are also being enlarged.

Louisville now stands before the world, a large, well-regulated city, rich in capital, rich in natural resources—rich, and growing richer, in artificial facilities of every kind—at once, and by far the most inviting field, especially for manufacturers and mechanics, in the Western country.

The following pages exhibit a faint manifestation of the spirit and prospects of the city;—but, desiring to make our book small, in order that it may have a very general circulation throughout the country, we have been obliged to omit much that is interesting, and some things of importance.

The reader will find little in the style to admire—our aim being rather to enlighten than to entertain, to furnish facts rather than fancies. We are conscious of imperfections, yet indulge the hope that our well meant efforts may prove useful, which is our highest aim.

If this little volume shall prove acceptable, we may follow it with a more perfect one.



CUSTOM HOUSE. CORNER OF GREEN AND THIRD STREETS.

SKETCH OF THE HISTORY OF LOUISVILLE.

Louisville is situated on the Southern bank of the Ohio river, at the Falls of said stream, in latitude $38^{\circ} 3'$ North, and longitude $85^{\circ} 30'$ West of Greenwich. Its position is one of remarkable beauty, and of great natural advantages as a manufacturing and commercial point. The obstruction of navigation by the rapids, causing the river to spread into a broad, beautiful sheet of water a mile wide, almost without a current, and perfectly straight for a distance of six miles above the Falls, forms a lovely feature of a charming landscape, and also one of the safest harbors for all kinds of river craft any where to be found. The descent of the river over a bed of limestone rock, 24 to 26 feet, in a distance of two miles, while it causes a pause in the progress of navigation, both ascending and descending, also provides water power for manufacturing equal to any in the United States. And, besides this, a vast extent of level, beautiful, and highly fertile lands, spreads out on either side of the river for many miles. These advantages of beauty and utility did not fail to strike the eyes of those enterprising white men who were the first to see them.

Here, then, as having reached all that man could expect to find on earth in the way of natural advantages, the hardy pioneer, after a long and perilous voyage, moored his boat and pitched his tent.

But few settlements, in any portion of the known world, have ever been effected under so many discouraging circumstances, as that of Louisville and its adjacent country. The great bone of contention between the Northern and Southern tribes of Indians, who disputed the possession of it with each other for a hunting ground, it was not likely they could see a foreign people step in between them and take possession of it, without a violent struggle on their part to prevent it.

Man, in his natural and savage state, is by far the most remorseless and cruel animal of the creation, surpassing the tiger in ferocity, and incapable of forgiving an injury, however unintentionally it may have been offered to him. No matter what length of time may have elapsed from the moment in which it is committed—no matter what motives may have palliated, excused, or justified the deed—nothing, no, not the silence of the tomb, can protect the object of his hatred:—he must have blood! and, in default of the offender, by a refinement in cruelty, making revenge to reach beyond the grave, he wreaks it on his defenceless widow or helpless children!

Such were the people among whom the daring settlers of Kentucky first pitched their tents in 1769. No sooner did they appear among the tawny sons of the forest, than the war-whoop was heard—the hell-hounds of death were let loose, and murder stalked triumphantly abroad. Every sun that rose witnessed some work of destruction—every wind that blew, wafted on its wings the heart-appalling yells of an infernal pack, fresh from their butcher chase; and that dust that had oft before imbibed the blood of the savage, now became saturated with that of his civilized brother.

The fury of an ever-active and wary foe was not the only danger that threatened extermination to those few brave spirits who ventured to this "land of blood." Disease reared her pale form among them; so that many escaped the hatchet and the knife, only to receive their doom from its fell influence. Hunted and watched by the natives, like the beasts of the forest, depending upon their rifles for their support, the pursuit of which forced them into the toils, their bodies enervated by sickness, and their minds enfeebled by the con-

tinual apprehension of danger—deprived of all medicine or medical aid—it is not to be wondered at that so few were added to their number, that a settlement so situated progressed but slowly. [*See Dr. H. McMurtry's Sketches of Louisville.*]

The first white man who visited Kentucky, of whom we have any account, was James McBride, who traveled through it in 1754. The earliest account we have of a settlement here, is that of Capt. Thomas Bullitt, who, in 1773, deputed by a special commission from William and Mary College in Virginia, came to survey lands and make settlements in the then territory of Kentucky. He landed at the head of the Falls, and having satisfied himself of the many and great advantages of this post, established his camp here. Having erected temporary shelter for his men and stores, he made surveys of much of the adjacent country as far down as Salt river, to which he gave this name, because he there found the celebrated Salt Lick, which is still known as Bullitt's Lick. He held his new settlement in high estimation, on account of its many advantages, and purposed to return at once to his friends and procure the means to establish it. But death sought him in the midst of his well laid plans, and it was left for another to complete what he had so nobly begun.

After Bullitt's expedition had been thus suddenly checked, the Falls were visited only by a few hunters and traders; and it was not until 1778 that any new attempt was made toward a permanent settlement on this site.

In that year, Col. George Rogers Clarke, acting under the authority of the Legislature of Virginia, descended the Ohio with a detachment of three hundred men, destined to the reduction of Kaskaskia, Cahokias, and Vincennes, then British possessions. In order to deceive the enemy, Col. Clarke landed his troops on an island opposite the present City of Louisville, and had the ground cleared in order to enable six families who accompanied the expedition, to plant corn thereon, which they did in the same year, viz: in the spring of 1778. The six families were James Patton, Richard Chenoweth, John Tuel, William Faith, John McManus, and one other, whose name can not now be ascertained. Thus, with a feigned view of settling the country, he allayed the suspicion of the enemy with respect to his ultimate object. The detachment, headed by its enterprising leader, then proceeded on its march, leaving behind the aforesaid families, who, in the fall of 1778, removed to the main land, immediately opposite the island, which, from their little corn-field, has ever since been called Corn Island. Here they erected their cabins, the first dwelling houses ever built in Louisville.

An addition was made to their numbers in the spring of 1779, by the arrival of a few emigrants from Virginia, who seated themselves adjoining and a little below them. In the fall of the year 1779, the government of Virginia opened an office for the sale of her lands situated on the western waters southeast of the Ohio and north of Green rivers, "at forty pounds per hundred," receiving in payment her paper money, which was not worth more than one shilling *specie* in the pound. This occasioned a very considerable influx of adventurers, who settled throughout the country, in stations or forts, so called from their being compelled to arrange their cabins in such a way as would serve for the purposes of defence, in case of an attack from the Indians. At this period there were but two avenues to Kentucky: the one led through the wilderness, the other down the Ohio. Those who came by the first, settled at Logan's Station, Harrodsburg, Boonsborough, and Lexington, and many who descended the river landed at Limestone (now Maysville), and pursued their way to Lexington; but others, not intimidated by reports of sickness prevalent at Louisville, nor of the murders committed on its settlers, continued on to that place. In the same fall, and the spring of 1780 seven different stations were settled on

Beargrass, near Louisville, and also Boon's station, near Shelbyville. Thus was laid the foundation of this, at present, flourishing *Entrepot of the West*.

In May, 1780, the Legislature of Virginia passed an "Act for establishing the Town of Louisville, at the Falls of Ohio." One thousand acres of land were by this act "vested in John Todd, Jr., Stephen Trigg, George Slaughter, John Floyd, William Pope, George Merriwether, Andrew Hines, James Sullivan, and Marshall Brashears, gentlemen, trustees, to be by them laid off into lots of half acre each, with convenient streets and public lots, which shall be, and the same is hereby established a town by the name of Louisville."

In accordance with this act, Louisville was first laid out in 1780, by William Pope. A new survey was subsequently made by William Peyton, assisted by Daniel Sullivan, who plotted the out-lots. None of these surveys, however, or any papers belonging to them, are to be found at this day; owing to some unaccountable negligence or sinister intentions they have been destroyed, a circumstance that produced much dispute and litigation with respect to boundaries. The only plat deposited among the public archives, is that deposited in 1812, according to a survey of Jared Brooks. [*See Sketches of Louisville, by Dr. H. McMurtry, 1819.*]

"The out-courses of this survey are from 35 poles above the mouth of Beargrass creek, on the bank of the Ohio river, S. 83 W. 35 poles to the mouth of the creek; thence N. 87 W. 120 poles, N. 50 W. 110 poles to a heap of stones and a square hole cut in the flat rock; thence S. 88 E. 769 poles to a white oak, poplar and beech, N. 37 W. 390 to the beginning, no variation." Main, Market, and Jefferson streets, which run nearly east and west, are each 90 feet wide, all others 60, except Water street, which is but 30.

The squares formed by the intersection of these streets are divided into half acre lots, as far as Green street, but those south of that were laid off in five, ten, and twenty acres, through which the cross streets were to be continued as they might be wanted. A slip 180 feet wide, south of Jefferson street range of lots, extending the whole length of the town, had been reserved for a common, but the Trustees had it laid off in lots and sold it. The cross streets were twelve in number, and called First, Second, Third, &c., being each 60 feet wide.

There were many ponds within the town plat, and these proved a source of disease for several years, until, by the advancing improvement of the streets, and filling up of lots, they have all disappeared, and with them the deadly fevers which long ravaged the place. Indeed, we of the present day, when Louisville is justly considered the healthiest city in the west, if not in the world, can have little conception of such a state of things as then existed. It was then called the graveyard of the Ohio, and people were as much afraid of it, as a dwelling place, as they now are of New Orleans.

In 1780, during the same year in which the town was established, it received many valuable accessions to its inhabitants; yet the Indians continued to be troublesome, and lives were lost, prisoners taken, and horses stolen. Soldiers were sometimes shot near the fort, and many "hair-breadth 'scapes by field and flood" are related of those times, in the written and unwritten annals of Louisville. One of these we will give as we find it in Casseday's History of Louisville: Four young lads, two of them named Linn, accompanied by Wells and Brashears, went on a hunting expedition to a pond about six miles southwest of Louisville. They succeeded well in their sport, having killed, among other game, a small cub bear. While they were assisting the elder Linn to strap the bear on his shoulders, and had laid down their guns, they were surprised by a party of Indians, and hurried over to the White river towns, where they remained in captivity several months. One of the party had in the mean time, been carried to another town: and late in the fall the remaining three deter-

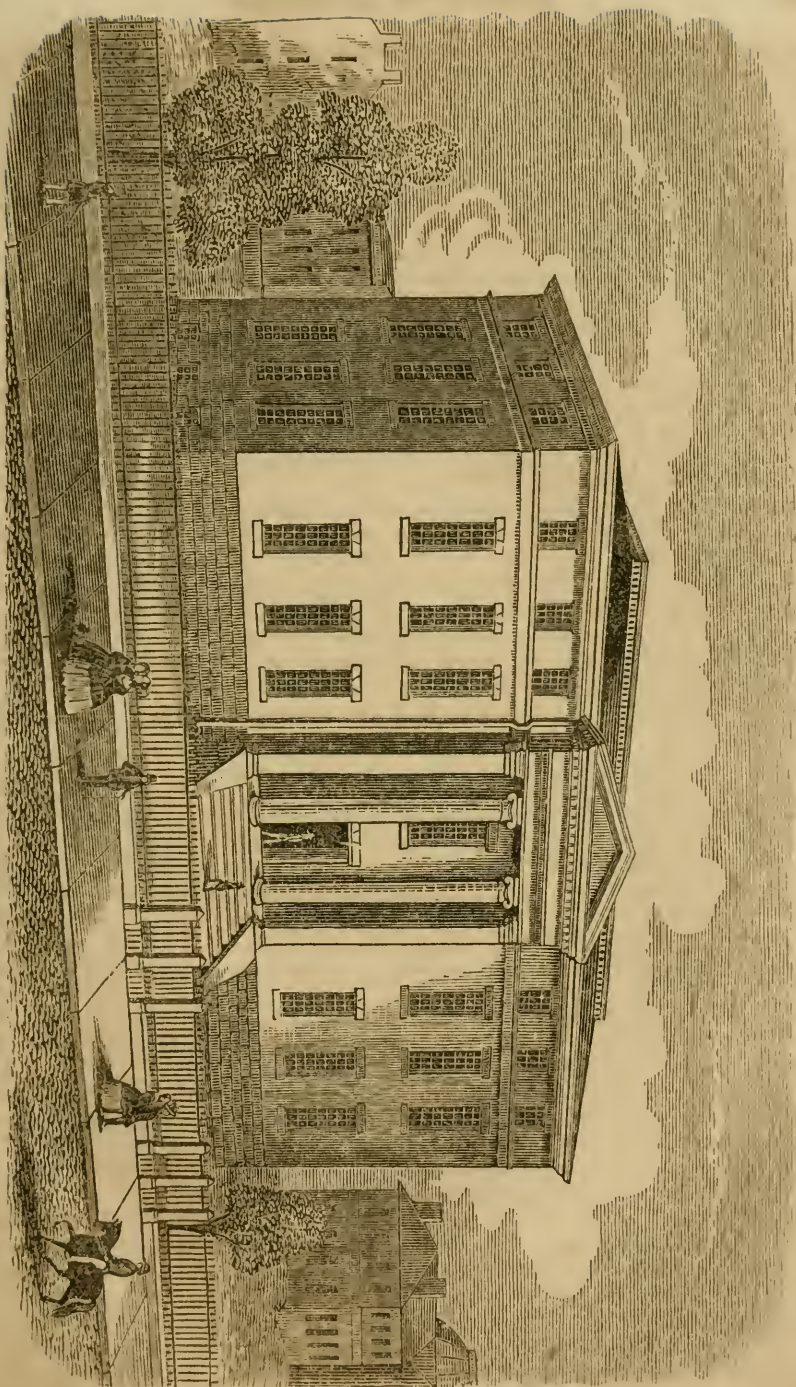
mined to effect their escape. When night had come, they rose quietly, and having stunned the old squaw, in whose hut they were living, by repeated blows with a small axe, they stole out of the lodge and started for Louisville. After day-break, they concealed themselves in a hollow log, where they were frequently passed by the Indians, who were near them every where; and at night they resumed their march, guided by the stars and their knowledge of woodcraft. After several days, during which they subsisted on the game they could procure, they reached the river at Jeffersonville. Arrived here, they hallooed for their friends, but could not succeed in making themselves heard. They had, however, no time to lose—the Indians were behind them, and if they were retaken, they knew their doom. Accordingly, as two of them could not swim, they constructed a raft of the drift-logs about the shore, and tied it together with grapevines, and the two launched upon it, while Brashears plunged into the water, pushing the raft with one hand and swimming with the other. Before they had arrived at the shore, and when their raft was in a sinking condition from having taken up so much water, they were desiered from this side, and boats went out and returned them safely to their friends.

In 1781 a new fort was built, but we have no information as to the name or location of this fort. Its name and its history are swallowed up in that of Fort Nelson, which must have been built very soon after, if it was not commenced at the same time as this nameless fort. Fort Nelson was built in 1782, by the regular troops, assisted by all the militia of the State. It was situated between Sixth and Eighth streets, on the north side of Main, immediately upon the "second bank" of the river. It contained about an acre of ground, and was surrounded by a ditch eight feet wide and ten feet deep, intersected in the middle by a row of sharp pickets. This ditch was surmounted by a breastwork of log pens, filled with the earth obtained from the ditch, with pickets ten feet high planted on the top of the breastwork. Next to the river, pickets were deemed sufficient, aided by the long slope of the bank. There was artillery likewise in the fort. General Clarke (he had now been promoted to this grade) had placed here a double fortified six-pounder, which he had captured at Vincennes. This piece played no inconsiderable part, both in the previous and subsequent expeditions of this General. Seventh street passed directly through the gate of the fort, opposite the head-quarters of Gen. Clarke.

It was during this year that the celebrated barge navigation to New Orleans was commenced, or rather established, by Messrs Tardiveau & Honore. A few of the largest of these vessels were of the capacity of one hundred tons, and three months were required to come from New Orleans to Louisville. This was the quickest time, and most of the boats required four, five, and even six months.

In 1783, peace having been declared with Great Britain, an army was no longer necessary to guard the frontier against her allies, the Indians, and the troops were disbanded. Gen. Clark and his soldiers received a grant of one hundred and fifty thousand acres of land lying north of the Ohio, to be located where they chose. This grant was made by the Legislature of Virginia, and they chose the region opposite the Falls, and thus was founded the town of Clarksville, which is little more improved now than it was then. It is recorded that in this year, "A lot of merchandise, all the way from Philadelphia, arrived at the Falls, and Daniel Brodhead opened here a retail store." Another incident of this year is worthy of notice. The notorious Tom Paine had written a book ridiculing the right of Virginia to this State, and urging Congress to take possession of it. Two Pennsylvanians, named Galloway and Pomeroy, disciples of Paine, came here and produced considerable annoyance among some of the landholders, inducing some people to pay no respect to the titles of their neighbors. This was an offense which was not contemplated by the law-makers, yet

MEDICAL DEPARTMENT OF TOWNSVILLE UNIVERSITY, CHESTNUT STREET, NEAR EIGHTH.



all admitted these men ought to be punished. At length an old law was brought to light, imposing a penalty in tobacco upon "the propagators of false news, to the disturbance of the good people of the colony." Under this law, Pomeroy was tried and sentenced to pay 2000 pounds of tobacco, and to give security for his good behavior in the sum of £3,000 beside. A similar fate awaited Gallo-way, but receiving a hint that if they would run away they would not be pursued, they gladly embraced the offer and departed. Such "higher law" and radical notions as emanate from infidels and levelers, never have met with any favor in Louisville, and let all the people say Amen!

In 1784 the town of Louisville contained "63 houses finished, 37 partly finished, 22 raised but not covered, and more than one hundred cabins."

In 1789 the first brick house was built in Louisville. This structure was erected by Mr. Kaye, an ancestor of our well-known fellow-citizen and former Mayor, on Market street, between Fifth and Sixth streets; the second brick building in Louisville was erected by Mr. Eastin, north side of Main, below Fifth; and the third by Mr. Reed, at the northwest corner of Main and Sixth.

In July, 1790, the Kentucky Convention met, and during the month of December succeeding, Gen. Washington brought before Congress the subject of the admission of Kentucky as a State, and on the 14th of February in the next year (1791), the long-sought boon was granted. The ensuing December was chosen as the date of election for the framers of a Constitution for the new State, and in April, 1792, that instrument was prepared, and Kentucky took her position among her sister States—the first-born of the Republic.

In 1797 we get the first clearly established estimate of the town of Louisville. In the records of the Board of Trustees the list of taxes occurs. These were assessed on the third day of July, "on all who reside within the limits of the half acre lots," and one Dr. Hall was appointed assessor and collector. Here is his list of assessments:

	£	s.	d.
50 horses, at 6 <i>d.</i> per head.....	1	5	0
65 negroes, at 1 <i>s.</i> per head.....	3	5	0
2 billiard tables, at 20 <i>s.</i> each.....	2	0	0
5 tavern licenses, at 6 <i>s.</i> each.....	1	10	0
5 retail stores, at 10 <i>s.</i> each.....	2	10	0
Carriages, 6 wheels, at 2 <i>s.</i> per wheel.....		12	0
Town lots, at 6 <i>d.</i> per 100 £, is.....	8	13	6
80 tithables, at 3 <i>s.</i> each.....	12	0	0

Making a total of.....£31 15 6

This year the office of Falls Pilot was created, and a fee of \$2 per boat allowed the pilot for his services.

During the year 1778, the Assembly passed an act allowing the formation of fire companies, by any number of persons exceeding forty, who should record their names and subscriptions in the county court.

A Lodge of A. Y. Masons was organized here in 1801, being the first in the place, and called Abraham's Lodge. Clarke Lodge, named in honor of Gen. George Rogers Clarke, was the second, and was chartered in 1817. The first Royal Arch Chapter received its warrant and commenced its operations in 1818.

The year 1800 found Louisville with a population of 800 souls; and the same year an act was passed setting aside the sum of £25 from the annual tax, to be appropriated toward the building of a Market House on the public ground in said town. This act also placed the harbor of Beargrass entirely under the direction of the Trustees. The prices of half acre lots at this time, on the principal streets, ranged from seven to fourteen hundred dollars. The next

year the Market House act was repealed, because there was no public ground to build it on; the Trustees having sold every foot of land originally set apart for commons, market houses, &c., &c. A new act was now passed, enjoining upon the Trustees "to fix upon some proper place, such as shall seem most convenient to the inhabitants of the town, and there erect a suitable Market House." They fixed the location, as every body knows, in the middle of one of the principal streets. Shame on this suicidal policy—it will be regretted by generations yet unborn. But for this singular and unwise policy of the Trustees, we would now have the handsomest city in the world. Ample grounds for parks, public buildings, lawns, and commons, were reserved in the original survey, but ere the people were aware of it, they were all swept from the map of the town, and the market houses had to be placed in the middle of a fine central avenue. Their unwise and illegal action in this matter will astonish our readers. Such want of regard for the future welfare of the city may well excite surprise. As an instance of the utter recklessness of the Trustees in regard to public grounds, we quote the fact, that "a half acre lot on Main street, near Fourth, was disposed of by their order, at public auction, for a horse valued at twenty dollars." When it was ascertained that all the public grounds had been disposed of, there was general dissatisfaction, but it was of no avail. The same worthy author, to whom we are so much indebted, scolds the Trustees roundly, but it was too late, the deed was done, there was no remedy.

In 1802, the town of Jeffersonville, on the opposite side of the river, above the Falls, was established. This is now a fine, flourishing little city, and promises to be still more important. The Indiana State prison is located there.

In 1803, the town of Shippingport was laid out. This place once promised to rival Louisville, but the opening of the canal entirely removed the business from it.

In 1819, Dr. H. McMurtry, in his Sketches of Louisville, says of Jeffersonville: "It contains a market house, a land office, court house, and a private bank, named the "Exchange Bank of Indiana"—J. Bigelow, President. About a mile from the town are several valuable springs, mineralized by sulphur and iron, where a large and commodious building has been erected by the proprietor for the reception of those who seek relief either from physical indisposition, their own thoughts, or the disagreeable atmosphere of cities during the summer season; in a word, he is preparing a watering-place, to which there is nothing objectionable but its proximity to Louisville; its being so near, requires neither equipage nor the expenses of a journey to arrive there, things absolutely required to render every place of the kind perfectly *a la mode*. It is, however, one of the most powerful natural chalybeate waters I have ever seen or tasted, and will, no doubt, prove very serviceable in many complaints, particularly in that debility attended with profusely cold sweats, which are constantly experienced by the convalescent victim of a bilious fever."

In the year 1804, an Act of Assembly invested the Trustees with power to levy a sum not exceeding eight hundred dollars for repairing the streets.

During this year, Mr. F. Cumming, a European traveler, visited Louisville, and thus states his impressions of the place: "I had thought Cincinnati one of the most beautiful towns I had seen in America, but Louisville, which is almost as large, equals it in beauty, and in the opinion of many, exceeds it. It was considered as unhealthy, which impeded its progress until three or four years ago, when, probably in consequence of the country being more opened, bilious complaints ceased to be so frequent, and it is now considered by the inhabitants as healthy as any town on the river. There is a market house, where is a good market every Wednesday and Saturday. Great retail business is done here, and much produce shipped to New Orleans."

In 1806 six keel boats and two barges, the one of thirty tons, belonging to Reed, of Cincinnati, the other of forty tons, owned by Instone, of Frankfort, sufficed for the carrying trade of Louisville and Shippingport. The following year, 1807, we find the first mention of a newspaper being published in Louisville. It was called *The Farmers' Library*. There is no record of its origin or ownership, however, and it is known only from an act of Assembly requiring certain laws to be published in its columns. Its bare mention is all that is left to posterity.

In order to show the progress of the town since 1797, a period of ten years, we give the tax list for 1807. It will be recollected that the entire list of 1797 amounted to 31£ 15s. 6d. The list for this year, as shown by the Assessor's books, was:

\$74,000 value of lots at 10 per cent.....	\$740 00
113 white tythes at 50c.....	56 50
82 black tythes over 16 years, at 25c.....	20 50
83 black tythes under 16 years, at 12½c.....	10 38
11 retail stores, at \$5.....	55 00
3 tavern licenses, at \$2.....	6 00
30 carriage wheels, at 12½c. per wheel.....	3 75
2 billiard tables, at \$2 50.....	5 00
131 horses, at 12½c. per head.....	16 37½
Total.....	\$913 50½

The first theater in Louisville was built in 1808, and "was but little better than a barn," until 1818, when it fell into the hands of Mr. Drake, who made of it "a handsome brick building, of three stories, and fitted it up with a degree of taste that did honor to its proprietor. It stood on the North side of Jefferson street, between Third and Fourth, and was destroyed by fire in 1843."

In October or November, 1810, *The Western Courier*, a weekly newspaper, was commenced by Nicholas Clark. About the same time *The Louisville Correspondent*, was issued, and was edited by Col. E. C. Barry. Of the former, Mann Butler was Associate Editor for a short time. The first regular police officers were appointed in the year 1810. They were two in number, John Ferguson and Edward Dowler, and their salaries were \$250 each per annum. The same year a Courthouse was commenced on a large square bounded by Fifth, Seventh, Market and Jefferson streets. This building was of brick, built after a plan drawn by John Gwathmey, and was finished in 1811. Dr. McMurtry said of it in 1819: "It is generally allowed to be the handsomest structure of the kind in the Western country. The present jail occupies the site where it stood."

In October, 1811, the greatest event for the Western country that ever occurred, took place. This was the commencement of steamboat navigation. Fulton's steamboat, called the "New Orleans," left Pittsburg at the above date, and "late at night, on the fourth day after quitting Pittsburg, she arrived in safety at Louisville, having been but seventy hours descending upwards of seven hundred miles. The novel appearance of the vessel, and the fearful rapidity with which it made its passage over the broad reaches of the river, excited a mixture of terror and surprise among many of the settlers on the banks, whom the rumor of such an invention had never reached; and it is related that on the unexpected arrival of the boat before Louisville, in the course of a fine, still, moonlight night, the extraordinary sound which filled the air as the pent up steam was suffered to escape from the valves on rounding to, produced a general alarin, and multitudes in the town rose from their beds to ascertain the cause. I have heard that the general impression among the Kentuckians was, that the comet had fallen into the Ohio. But this does not rest upon the same founda-

tion as the other facts which I lay before you, and which, I may at once say, I had directly from the lips of the parties themselves."—*Latrobe's Rambles in America*.

December 16th, 1811, at fifteen minutes past two o'clock at night, came the first of those fearful earthquakes which threatened to destroy the town, and which continued at intervals for four months. They carried consternation to all hearts, and during the whole term of their continuance there was little leisure or disposition for business. In this same year, (1811), the first Church edifice was built. It was a Catholic chapel, built by Rev. Mr. Badin, on a lot given by Mr. Tarascon, near the corner of Eleventh and Main streets.

About the beginning of the year 1812, the first incorporated bank in Louisville was opened. It was a branch of the Bank of Kentucky, and had a capital of one hundred thousand dollars. It was situated on the north side of Main street near Fifth, and was under the direction of Thomas Prather, President, and John Bustard, Cashier. During the same year the first iron foundry was established by Mr. Paul Skidmore. It was in this year that, by order of the Legislature, Main street was paved from Third street to Sixth, at the expense of the owners of lots fronting on said street. This was the first paved street in Louisville, at least that we can find any record of. About this time a second Church was built, being the first Protestant place of worship in the town. It was built on the north side of Market street, between Seventh and Eighth, and was under the direction of the Methodists, but was opened for the ministers of all denominations, being erected by the subscriptions of all the citizens. It was soon found to be too small to accommodate the growing population of the town, and was accordingly sold and converted into a dwelling, and is still standing. The Fourth Street Methodist Church was built, in 1815, with the proceeds of the sale. It was built on Fourth street, between Market and Jefferson, on the east side, and adjoining the alley. The present fine block, built and owned by Mr. Wm. Love, occupies the ground where the old Fourth street Church formerly stood.

In 1814 the town of Portland was laid out by Alexander Ralston, for William Lytle, the proprietor. It is handsomely laid out with wide streets and large roomy lots, and since its incorporation into the city of Louisville, it has been greatly improved, being the landing for all the large boats in low water. During the same year the town of New Albany, opposite to Portland, in Indiana, was laid out by its proprietors, the Messrs. Scribner. It is now a flourishing and pretty little city, with many advantages, which will always make it a place of importance. It is, and has been for many years, a most important point for steamboat building, equal perhaps to any other on the Ohio river. An old historian says, what we regard as very praiseworthy of its excellent citizens, viz: "that they are all either Methodists or Presbyterians." May they continue to be worthy of such noble distinction. New Albany and Louisville are so identified in business and in interest that what effects the one effects the other; and the same remark is true of Jeffersonville, at the head of the Falls. In fact these two pretty and thriving little cities bid fair to meet, some day, on the Indiana side, as Louisville, Portland and Shippingport have already done on the Kentucky side. The time will come when the whole country around the Falls, on both sides, will be one vast city, with the Ohio running through it; and even that will be spanned by connecting bridges. The many advantages of this locality will not fail to concentrate people and capital until this will be realized. During this same year, (1814), Messrs. Jacob and Hikes put in operation a paper mill at this place. The *Western Courier* was issued on paper made at this mill.

The following list will give an accurate idea of the size, commerce and manufactures of Louisville at the commencement of the year 1815: Twenty-four

mercantile stores, one book store, one auction and commission store, one clothing store, one leather store, one drug store, one plane maker, one carding and spinning factory, one tin shop, four bazaars, four ropewalks, four High Schools, one theater, two taverns, (inferior to none in the Western country, and several others of less note), five medicine shops, eight boot makers, four cabinet makers, two coach makers, one gunsmith, one silversmith, two printing offices, one soap factory, one air foundry, four bakers, two tobacco factories, six brick yards, one tan yard, three house painters, four chair makers, five tailors, five hatters, five saddlers, two coppersmiths, one steam saw mill, one nail factory, six blacksmiths, one brewery, one bagging factory, one stoneware factory, one Methodist church, one Catholic chapel.

It was on the first of June of this year, 1815, that the steamboat Enterprise. Capt. Shreve, arrived from New Orleans, having made the trip in twenty-five days. This trip was the subject of general remark and congratulation. "On Monday the 3d day of July, 1816, was safely launched from her stocks, at the mouth of Beargrass, the elegant new steamboat Gov. Shelby," the first that was ever built at this place. She was of one hundred and twenty-two tons burden. Messrs. Desmarie & McClary were her builders. The same year the great "Hope Distillery" company was organized, with a capital of one hundred thousand dollars. This company purchased one hundred acres of ground at the lower end of Main street, and erected immense buildings thereon. These buildings were finally burned. The Louisville Library company was also incorporated this year.

A branch of the Bank of the United States was located here in 1817, Stephen Ormsby, President; William Cochran, Cashier; G. C. Gwathmey, Teller; Alfred Thruston, First Book keeper. It was situated at the northeast corner of Fifth and Main streets. There was erected this year a third Church, being the second Protestant church in the place. This was the Presbyterian church, situated on the west side of Fourth street, between Jefferson and Market, Rev. D. C. Banks was the first pastor. This church was burned down in 1836. In its belfry was hung the first church bell that ever waked the echoes of this valley. Even yet, many well remember the sweet tones of that "Church-going bell." Another event of this year was the incorporation of a Hospital company. Mr. Thomas Prather contributed five, and Mr. Cuthbert Bullitt two acres of land, as a site for the Institution. It was supported by a duty of two per cent. on auction sales in Louisville. It is a commodious building, surrounded with spacious grounds, and situated on Chestnut street, between Preston and East. During the same year, April 27, 1817, a dinner was given to Capt. H. M. Shreve, as a testimonial of the estimation in which he was held as a steamboat navigator, and to congratulate him on the expeditious voyage he had made to New Orleans and back. This voyage was made by the steamer Washington, and was performed in *forty-five days!* In May, 1818, a sugar refinery was established by Messrs. Maltz & Jacobson. They produced about three hundred loaves of refined sugar per day.

We present the following prices current, published in 1818: Bagging, 30c; cotton, 33@35c; wheat, 60@75c; coffee, 35@37c; teas, \$2.25@2.50; whisky, 62@75c; glass, 8 x 10, \$14@15; white lead, \$6; corn, 42@62c; molasses, \$1.50; tobacco, \$1.75@5; sugar, 16@18c; oats, 42@50c. *Freights*—Tobacco 1c $\text{\textcircled{P}}$ lb; flour \$1.50 $\text{\textcircled{P}}$ bbl; pork and whisky \$2 $\text{\textcircled{P}}$ bbl; light freight 6c $\text{\textcircled{P}}$ lb; heavy freight 4½c $\text{\textcircled{P}}$ lb.

Some attention had been paid to education, for Dr. McMurtry informs us in 1819, that there was a capacious brick Seminary, under the direction of the Trustees of the town at that time, wherein were taught the several branches of a regular and classical education.

In 1818 the Legislature passed an act incorporating the "President and Directors of the Louisville Insurance Company," with a capital of \$100,000, not to be increased beyond \$200,000. Thomas Prather, President.

By the assessment of 1818, the value of lots in the town is computed at \$3,131,463. This year another Bank was established here. It was the Commercial Bank of Louisville. Its capital was \$100,000. Levi Tyler, President; A. Bayless, Cashier; J. C. Blair, Clerk. On the first of July, of this year, Mr. S. Penn commenced the publication of *The Public Advertiser*, a paper which for editorial talent and skill, as well as for political influence, has been equalled by few in the United States.

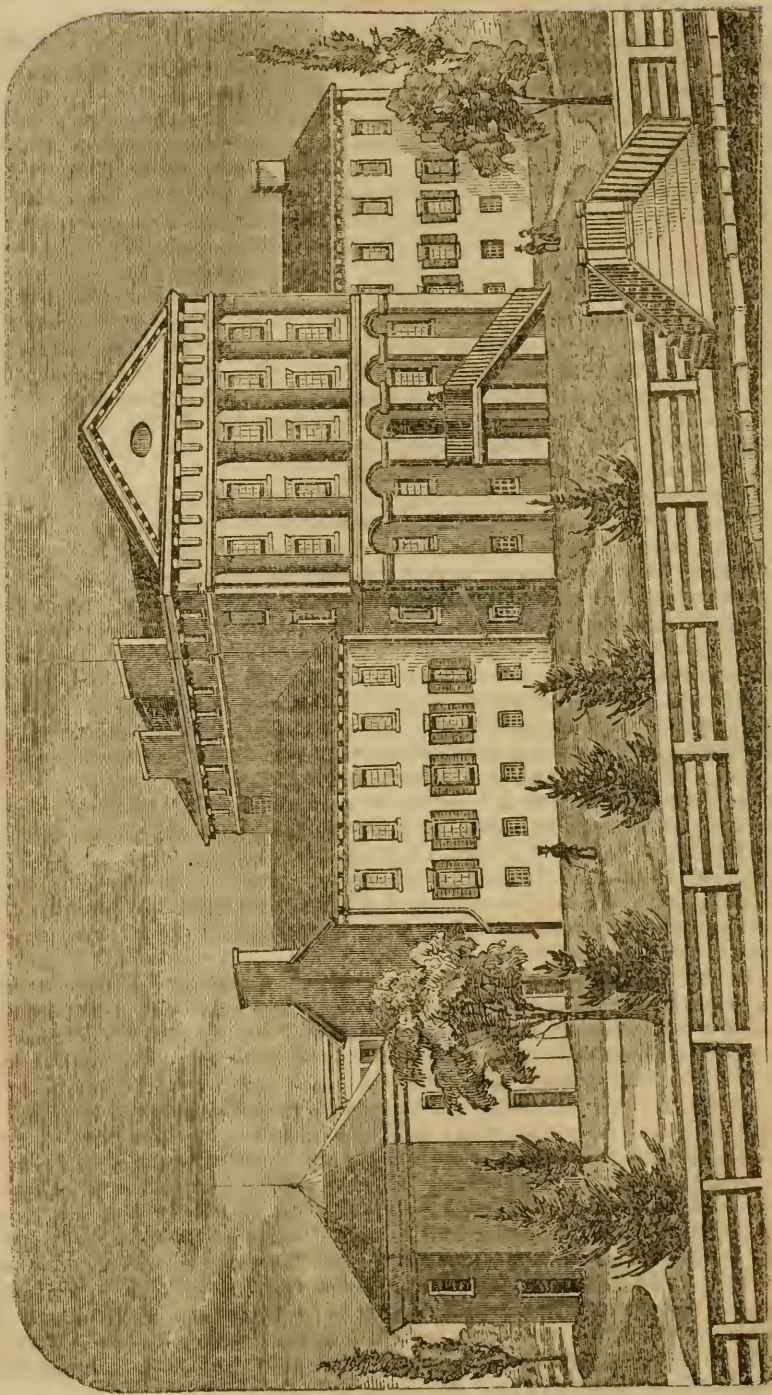
In 1819 Dr. Henry McMurtry published his "Sketches of Louisville." This work, to which we are deeply indebted for this "brief outline," is now out of print. It is valuable on account of the many facts which it furnishes, and which can now be found no where else. The Dr. says: "There are at this time in Louisville six hundred and seventy dwelling houses, principally brick ones, some of which would suffer little by being compared with any of the most elegant private edifices of Philadelphia or New York. The population now amounts to four thousand five hundred souls."

The following list will show the progress of the town for four years, the time since the last we gave: Three banks; three book stores; one nail factory; two hotels; ten blacksmiths; eight tailors; three watchmakers; one stone cutter; four turners; thirty plasterers; twelve lawyers; six brickyards; two breweries; one music store; thirty-six wholesale and retail stores; three printing offices; twenty-eight groceries; four good taverns; six saddlers; one silver-plater; ten cabinet makers; one upholsterer; five hatters; six shoe makers; twenty-two doctors; one air foundry; two steam saw mills; two tobacco factories; fourteen wholesale and commission stores; three drug stores; two confectionaries; six bakeries; two carriage makers; one gunsmith; three chair factories; one potter; two hundred carpenters; one hundred and fifty bricklayers; one brass foundry; one steam engine shop; two distilleries; one sugar refinery.

In the year 1820 several fire-engines were purchased, and the town laid off into three wards, and Coleman Daniel, Daniel McAllister and Peter Woolford were appointed, one to each ward, to obtain forty members each to work the engines. This was the origin of our fire department.

In 1824 and '25 the first Episcopal Church was built on Second street, between Green and Walnut. Rev. Mr. Shaw, Rector. It is the present Christ Church.

On the 12th of January, 1825, the Louisville and Portland Canal Company was incorporated, with a capital of \$600,000. The canal was completed and opened for navigation on the 5th of December, 1830. It cost \$750,000. We here give the dimensions of this canal: it is two miles long, lacking two rods, sixty feet wide at the water line above the locks, and the locks are fifty feet wide by two hundred long, they will chamber a boat one hundred and eighty-two feet long and forty-nine and a half wide. There are three locks of eight and a half feet lift each, and one guard lock, also a gate at the head of the canal to shut off the water when necessary. The depth of water in the canal at low water mark is thirty inches, at high water mark it is forty-two feet at the head of the canal and sixty-four at the foot. The average depth of the excavation is thirty-three feet. It is expected that the canal will be widened and lengthened in 1859, so as to pass boats of the largest class. It will be from thirty-five to forty feet wider, and a quarter of a mile longer, to afford room for the large new locks. The present locks will remain as they are, for the use of small boats, the new ones being in a position southwest of them, on a cut taken out just above the present guard lock.



LOUISVILLE CITY HOSPITAL. CHESTNUT STREET, BETWEEN PRESTON AND BROOK.

In 1826 another paper was established here, which was called *The Focus*, edited by Dr. Buchanan, assisted by Mr. W. W. Worsley, and published weekly by Morton & Co. "It was conducted with great ability until the death of Dr. Buchanan, when it was sold to Messrs. J. T. Cavins and G. S. Robinson. It was afterwards merged into *The Louisville Journal*, and placed, under the name of *The Journal and Focus*, in the hands of George D. Prentice as editor. This change took place in 1832. Since that time the *Journal* is too well known in all the reading world to need any further notice."

By the census of 1827, we find the population to be 7063, nearly double what it was in 1821.

On the 3d day of Nov. 1827, the citizens held a meeting for the purpose, and memorialized the Legislature to incorporate Louisville and her enlargements, a city; and on the 13th of February 1828, the act of incorporation passed, and Louisville became a city. The first election under this charter, was held on the 4th day of March 1828; Mr. J. C. Bucklin was elected Mayor; W. A. Coeke, Marshal; and Messrs. John M. Talbott, W. D. Payne, G. W. Merriweather, Richard Hall, James Harrison, J. McGilly Cuddy, John Warren, Elisha Applegate, Daniel McAllister, and Fred. Turner, Councilmen. Samuel Dickinson, was appointed Clerk. It was during this year that the first city Schoolhouse was built. It occupied the South-west corner of Walnut and Fifth streets, and was for that day, a large and creditable building. It could accommodate from 700 to 800 children, and was divided into male and female departments. This was the foundation of our present most admirable system of city schools, which will receive due attention in another part of this work.

The population of the city in 1830 was 10,336 souls. This year the *Daily Journal* was established.

In the year 1832, on the 27th of May, the first Unitarian Church was dedicated. It is on the corner of Walnut and Fifth streets, and is a neat and commodious building. Rev. George Chapman, of Massachusetts, was the first pastor. It was in this year that the Louisville Hotel was built. The first city Directory ever printed here, was issued during this year, by R. W. Otis. It contained much valuable matter; and from it we get a table of imports from Dec. 1, 1831, to Aug. 4, 1832, as follows: Flour, 48,470 barrels; bale rope, 26,830 coils; bagging, 33,411 pieces; china &c., 1,170 packages; coffee, 18,289 bags; cotton, 4,913 bales; mackerel, 12,037 bbls.; salt, 16,729 bls.; salt, Turk's Island, 18,146 bags; tea, 63,500 pounds; hides, 19,191; iron, 631 tons; lead, 231 tons; molasses, 6,309 bbls.; nails, 10,395 kegs; sugar, N. O., 7,717 hhds; sugar, loaf, 4,318 bbls.; tin plate, 3,108 boxes. 14,627 barrels of whisky were inspected during the same time. Of manufactories, Louisville then had 1 woolen mill, 1 cotton factory, 2 potteries, 1 flour mill, 2 foundries, 16 brick yards, 1 planing mill, 3 breweries, 2 white lead factories, and 4 rope walks. The Bank of Louisville was chartered this year, and \$1,500,000 subscribed to the capital stock in three days. A Museum was also opened by a number of gentlemen as stockholders, under the direction of Mr. J. R. Lambdin. A Saving's Bank was established under the direction of Edward Crow, President, and E. D. Hobbs, Treasurer.

In 1835 the Galt House was erected; and the first movement made towards lighting the city with gas. A census taken this year shows a population of 19,967, giving an increase of nearly one hundred per cent. in five years, that of 1830 being but 10,336.

The amount of goods sold in 1836 by forty-seven of the largest wholesale dry goods and grocery houses, is officially stated at \$12,128,666. Two more newspapers were added to the list in the city this year, *Louisville City Gazette*, a daily published by John J. & Jas. B. Marshall, and the *Western Messenger*, a

monthly, by Rev. J. F. Clark. It was in this same year that Portland was added to the limits of the city.

The Medical department of the Louisville University was organized also, during this period. The city set apart four acres of ground and the sum of \$50,000 in money for its use, and thus organized a Medical School, of which Messrs. Caldwell, Cook, Cobb, Flint, Yandell, Miller, and Lock, were the Professors. In February 1837, the corner-stone of the building for this use was laid, and soon after Dr. Flint, with money appropriated for that purpose, visited Europe, and purchased a fine library and apparatus for the institution. This school soon attained a very high reputation, and ranked among the first in the United States.

In 1838 the Railroad to Portland was opened for travel.

The principal event of 1839 was the lighting of the city with gas. This was done by a company established by charter, having a capital of \$1,200,000. The city is better lighted than any in the United States, if not in the world.

The "great fire" occurred in 1840, which consumed thirty houses, and destroyed property to the amount of \$300,000.

In 1845, Mr. N. P. Poor compiled a new Directory of the city. From this book we learn that the population in September 1845, was 37,218 souls. Of these, 32,602 were whites, 560 free blacks, and 4,056 slaves. The increase is thus shown to amount to 16,008 in five years, the census of 1840 having shown 21,210 souls. There were 12 large foundries for the construction of steam machinery, 1 large rolling mill, 2 steam bagging factories, 6 cordage and rope factories, 1 cotton factory, 1 woolen factory, 4 flouring mills, 4 lard oil factories, 1 white lead factory, 3 potteries, 6 tobacco stemmeries, 2 glass cutting establishments, 1 oil cloth factory, 2 surgical instrument makers, 2 lithographic presses, 1 paper mill, 1 star candle factory, 4 pork houses which will slaughter and pack about 70,000 hogs annually, 3 piano forte manufactories, 3 breweries, 8 brick yards, 1 ivory black maker, 6 tanneries, 2 tallow rendering houses, 8 soap and candle factories, 3 planing machines, 2 scale factories, 2 glue factories, 3 ship yards, and several factories of less note.

About this time, the Louisville and Frankfort Railroad was opened. The enterprise had been a subject of much interest for several years; many surveys had been made, and a good deal of work done, but after languishing between hope and despair, the city came to the rescue, and carried it to completion, by subscribing one million of dollars, which was paid by a tax of one per cent. for four years on all real estate within her limits, and this tax was re-paid to the owners in stock of the Company.

The completion of this important road, marked the beginning of a more liberal and public spirited policy in the history of Louisville. And in the year 1851 the great work of building a railroad from this city to Nashville, Tennessee, was commenced. The city subscribed \$500,000 to begin with, which was subsequently followed by a second subscription of \$1,000,000. This great work was temporarily retarded for a year or two, but such was its importance that it quickly recovered, and is now rapidly approaching completion. About 100 miles of the road is now completed, and it is expected the cars will run through to Nashville, by December of this year. It is doubtless, one of the most important roads in the western country. Besides the fact of its termini being two very important cities—centers of a very heavy business—it runs the whole distance through a most fertile country, thickly settled by a thrifty and intelligent population. It is in fact, the tobacco field of this tobacco growing State. It also abounds in grain and pork, and we may add, in iron ore of the best quality, much of which, in the form of superior pig metal, is now being received over the road almost daily. Moreover, it is the connecting link between the north

ern and southern systems of railroads, being by far the most eligible road in this respect in the country; nor is there a probability of its having any rival. The network of railroads with which it connects at either end, extending over the country in every direction, is wonderful.

In 1852 the city loaned her credit to the amount of \$200,000 to the Jeffersonville and Indianapolis Railroad. This has proved to be a very valuable road to Louisville. About the same time, the New Albany and Salem road, extending to the Lakes, was constructed, and it is also of vast benefit to Louisville.

In 1853 the Lebanon branch of the Louisville and Nashville Railroad was commenced. To this road the city loaned her credit to the amount of \$225,000. It was finished in 1858, and is a worthy exhibition of the enterprise of those who brought it into being. It runs through a fine country, and terminates in a beautiful thriving town, the center of one of the prettiest regions of Southern Kentucky. As far as it goes, it is in the direct line to Knoxville, Tennessee, and will no doubt be continued on ultimately to that point.

In 1858, the Memphis branch of the Louisville and Nashville Railroad was commenced, the city voting \$300,000 to this enterprise. When completed, it will be fully equal in importance, it is believed, to the main trunk. It is now under contract, and will be pushed on as fast as possible to completion. The country through which it runs abounds in wealth, and numerous populous and wealthy towns are also on the line, such as Bowling Green, Russellville, Clarksville, and others of less note.

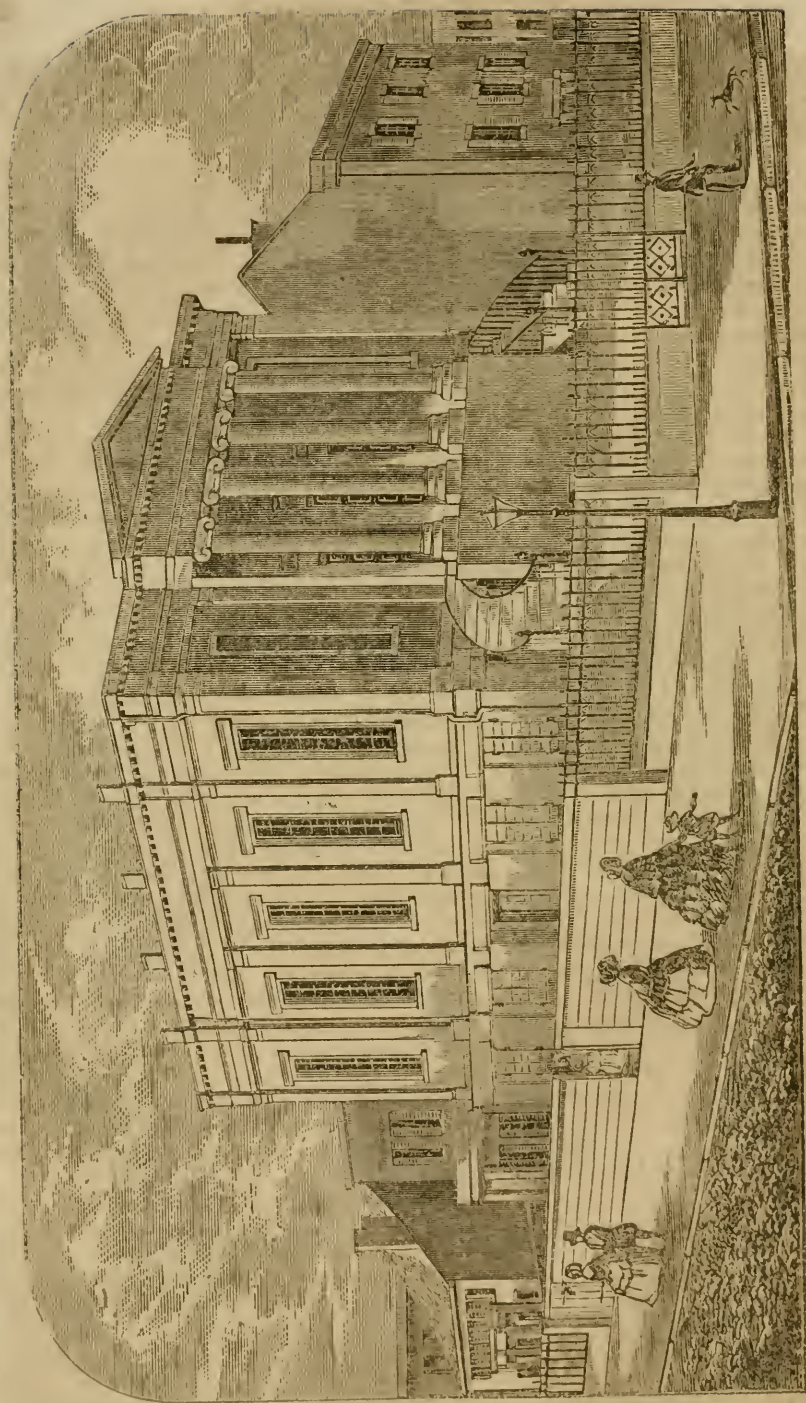
The Barren County branch of the Louisville and Nashville Railroad, is another important road commenced within the last two years, and now approaching completion. It is to run to Glasgow, the County seat of Barren County, a very pretty and pleasant town, and center of a vast agricultural region, of which tobacco, corn, wheat, and pork, are articles largely exported.

The Bardstown branch of the Louisville and Nashville Railroad is another road running to the pretty and thriving village of this name. It is in the midst of a very wealthy and beautiful country, has numerous male and female schools, and is a town of as much business as any place of its population in Kentucky. The grading of this road is now completed, and the track will be laid in a few months. When all these roads are completed, as they will be in one or two years, the effect must be to benefit Louisville immensely. But we must not let the bright prospect of the early completion of these important roads, cause us to overlook the Shelbyville branch of the Louisville and Frankfort Railroad. This road was commenced some time ago, but during the pressure it was suspended. Lately it has been revived, and as fully half the work has been done, and its importance is now greater than ever, it will, we have no doubt, be speedily completed. It runs through a country abounding in wealth, and as an agricultural district, hardly surpassed by any in the United States. Shelbyville, its eastern terminus, is one of the most important literary towns in the western country. The town is the County seat of Shelby County, and being one of the very best and largest Counties in the State, its trade must prove immensely important to this city.

The city Water Works was commenced in 1857, and it is expected to furnish water to the city by the end of the present year. See article on Water Works.

We here close our brief sketch of the history of Louisville, and refer the reader to the subsequent articles in this volume, for a better understanding of the progress of the city up to this date.

For most of the facts contained in this historical sketch, we are indebted to Dr. H. McMurtry's "Sketches of Louisville," published in 1819, and to "The History of Louisville," by Ben Casseday, Esq. Mr. Casseday's work was prepared with much labor and care, and contains matter of great interest. We thankfully acknowledge our obligations for his kindness, and would say to the reader who would see a more complete history of Louisville, get Mr. C.'s valuable history and read it.



WALNUT STREET METHODIST CHURCH, CORNER WALNUT AND FIFTH STREETS.

GEOGRAPHICAL POSITION OF LOUISVILLE.

Ever since the white man first set foot in the valley of the Ohio, the geographical position of Louisville has made it a marked point, and it is rightly regarded as the central city of the finest country in the world. When the citizens of the then territory of California memorialized Congress to admit them into the Union as a State, they entered into a description of that territory as compared with the two other grand divisions of the country. They spoke of the beauty and value of the eastern slope of the Allegheny mountains, then of the western slope of the Rocky mountains, and showed that the latter is preferable to the former; but then casting a glance at the broad and fertile valley of the Mississippi, lying between the two, they frankly acknowledge that it is far superior to either, and declare that it is the "*best home God ever made for man.*" We believe this accords with the judgment of all beholders. And surely if we consider it in regard to its extent, its fertility, its climate, the abundance and variety of its products and minerals, we shall be struck with the justice of the remark. Here is a country of such vast extent that the mind is bewildered that undertakes to admeasure it, and we feel lost in the contemplation of its capabilities. Already twelve great and powerful States are carved out of this vast valley, besides large portions of several others, and no one yet knows how many more equally important will be constituted in the same valley. It is the "manifest destiny" of this valley to become the mighty center of the population, wealth, and resources of North America, and ultimately of the world. In fact, it would seem that Divine Wisdom created and held in reserve, until the full development of the human mind, this vast theater on which to display the mightiest achievements of disenthralled humanity. The time having arrived in the progress of the race for God to "*enlarge Japheth,*" and cause him to "*dwell in the tents of Shem,*" he dispossessed the worthless and savage Shemetic tribes who would not "subdue the land and possess it," and gave it to the white race. Pent up, and cramped by unkindly institutions and want of territory in the Old World, God here invites Japheth to "walk abroad and view the land," as he did Abraham of old, that the boundlessness of the prospect, untold wealth of resource, and grandeur of the scene, might stimulate him to put forth, for the first time, the full, free, and vigorous powers, mental, moral, and physical, with which He has endowed him. If we are astonished at the greatness and the rapidity of the achievements of the white race in this valley, let us devoutly recognize the hand of God in it, as effecting, by His providence, through the agency of man, the mightiest achievements, mental, moral, and physical, that the world ever saw. If the number, growth, and wealth of western cities, towns and villages, sends a thrill through Europe, let us not wonder at their astonishment, or even incredulity, for we ourselves cannot keep pace with them.

We have no sympathy with those who chargo our government with the commission of wrongs against the "poor Indian," while God, who made, and consequently owns the world, is "making the wilderness glad and the desert blossom as the rose." Do they imagine that the great Maker of all looks down with less pleasure upon our thousand cities, ten thousands of churches, school-houses and benevolent institutions, than he did upon the senseless and savage, the idle and dirty Indians? How irrational, irreverent, and unthankful such a belief. But while we rejoice in the rich legacy thus graciously given us, and at the strange and glorious providence which has developed these mighty results in so brief a period, let us sacredly cherish the God-honoring institutions, civil and religious, under which we have achieved them, and which God so manifestly approves.

Now, if we compare one part of this vast country called the Mississippi valley

with another, we think it will appear that the valley of the Ohio is the choice portion of the whole. It is better watered, better timbered, and has a much better climate than the valley of the Mississippi proper, north-west of it.

Moreover, the recent analytical comparison of soils, made by Professor Peter, of the Geological Survey of Kentucky, establishes the fact that our soil is better than that of the prairies of the new States bordering on the Mississippi river. To give the reader a correct idea of the superiority of our soil we quote the language of Dr. Peter:

"The analysis of the prairie soil of the northern part of Illinois was introduced for the purpose of comparison with the soils of Kentucky. The specimen analyzed was collected by the writer himself, in October, 1855. Notwithstanding the luxuriance of the growth of the first crops on the prairie soil, occasioned partly by the large amount of available nourishing matter afforded by the decay of the thick sod, it is evident, from the above analysis, that, taking into consideration *durability* as well as *immediate fertility*, as ascertained by the chemical analysis of the soil itself, apart from the sod, there are many of our Kentucky soils—which take the second rank when compared with those of the *blue grass region*—which yet are fully equal to the prairie soil." * * * * *

"Compared with the *first rate* soil of Kentucky, that of the prairies contains a much smaller proportion of *alumina and oxide of iron*, as well as of *lime, magnesia, phosphoric acid, and alkalis*. It contains a much larger amount of *fine sand*, and doubtless a larger proportion of *coarser sand* than our best soils; and, therefore, whilst its large quantity of *organic matters* is held in the soil with a small force of attraction, (because of the large proportion which the *sand and silica* bear to the *alumina and oxide of iron*), and hence they are readily soluble and immediately available in the production of luxuriant crops; these very circumstances will cause its more speedy exhaustion; and when this accumulated deposit has been consumed by thriftless husbandry this soil must sink down to a second rate position." See Report Geological Survey of Kentucky, vol. 2 pp. 286, 287.

From the above it is clear that the vast and beautiful country, of which Louisville is the central city and commercial emporium, is the richest agricultural region on the Continent. Located in the center of the valley of the Ohio, she is in constant and easy communication with every part of it, comprising seven great States; and by means of the Ohio and Mississippi and their tributaries, with twelve of the largest producing States of America, besides several territories not yet organized into States. It requires no prophetic vision to see that these great States must soon become, if they are not already, the glory and strength of the nation. They have the soil from which to feed and clothe the world, and the timber and minerals to supply any demand, while the climate is salubrious and adapted to the growth of all the necessaries and nearly all the luxuries of life. As regards geographical position, therefore, no city is or can be better located inland than Louisville. But this important truth is susceptible of still further proof. There are, south and south-east of Louisville, six most important and powerful States not embraced in the Mississippi valley, nor previously noticed in this article, which, owing to their being nearer to us than to any other of the great cities of the valley, and also in consequence of our position and relations to the South, are in the relation of most important and valuable customers to Louisville. All these great sugar, cotton, and rice growing States are our neighbors, yea, our kindred; and though we have long been separated by the absence of convenient and speedy transportation, yet soon we shall be fraternally bound to them with bands of iron. Our great railroad will, in a few months, connect with theirs, and convey us to their sunny plains and thence to our work-shops and provision houses. Every hour our rails are being

extended towards them, and we wait impatiently to shake hands with them and give them a real Kentucky welcome—to open a new and profitable trade and social intercourse with a noble, patriotic race, from whom most of our fathers sprung. Let it be borne in mind that our road will put us in immediate connection with the whole net-work of southern railroads, enabling us to reach all parts of that extensive, rich, populous, and patriotic region. To show the extent and value of this new field of trade, we give a few facts: There are seven great States, not newly organized in a wild country just reclaimed, but old, wealthy, well organized, and powerful. They comprise a territory second in extent only to the valley of the Mississippi itself, reaching from Cape Hatteras on the east to the Mississippi valley on the west, and from the State line of Kentucky on the north to the Florida Keys on the south. The population of this territory, according to the last official census-tables, was 5,272,639; the cash value of farms was \$469,313,074; the value of farm products, exclusive of live stock, was \$211,550,947; and the total value of property, real and personal, \$1,945,033,910. The secretary of the treasury says, “The valuations of property are for assessment purposes, and are not only low, but the taxable property only has been valued; and in all the States there are many kinds of property (some of it valuable) that are not taxed.” This vast country is the cotton and rice-growing region of the United States; sugar is also produced in a large portion of it, and, as long as these great staples hold the place they do in the markets of the world, this will be a country of vast wealth and importance. All this vast and important field of trade will be new to Louisville, and if she be true to herself and worthy of her position and relations, she can and will retain it. When we consider the extent of this field, its soil, its climate, its wealth, its population, and the identity of their interests and institutions with our own, we can not fail to be struck with the almost incalculable value of it to Louisville. Where can they go for the thousands of engines, plantation mills, cotton-gins, sugar-mills, wagons, carts, plows, shovels, spades, hoes, pork, lard, bacon, beef, flour, furniture, etc., so readily as to Louisville? Enterprize, energy, and industry can and will bring them here for all these and a thousand other things. They prefer to come here rather than to go North for their supplies. Let us go to work with new energy, then, to meet this new demand for our manufactures. Let us emulate our northern fellow-citizens in enterprize and industry, in going down South and inviting trade, and in fair dealing and inducements. We may reasonably expect to see many southern planters here shortly, not only to spend the summer months, but as permanent citizens of our beautiful city. They can reside here and be almost within a summer day’s ride of their plantations!

But having sketched the extent, wealth, advantages, &c., of this *new field* of trade, we can not omit to speak in like manner of the great field of which Louisville occupies the center. We have seen that, as regards geographical location, Louisville occupies the most eligible position in the west. But this fact will appear still more clearly by noticing the extent and value of country with which she is immediately surrounded. The following rivers are navigable from Louisville throughout their vast ramifications without transshipment, viz: Allegheny, Arkansas, Big Black, Barren, Big Sandy, Cumberland, Des Moines, Green, Grand, Hatchee, Illinois, Iowa, Kaskaskia, Kentucky, Kanawha, La Mine, La Fouché, Missouri, Merrimac, Monongahela, Muskingum, Mississippi, Ohio, Obion, Osage, Rêd, Rock, Sun Flower, Tennessee, Wabash, White, Wisconsin, and Yazoo; and besides these, there are a multitude of *Bayous* in Louisiana and Mississippi, which extend steam navigation through several hundreds of miles of the finest kind of sugar, cotton, and rice growing country.

These thirty-three rivers, without the bayous, give Louisville natural avenues

of commerce and trade with fifteen States, and with three hundred and forty-six Counties, having a population of 5,000,000 souls; and the cash value of their farms in 1850, was \$601,312,416; of farm products \$218,992,007; and of live stock \$87,413,443; total value \$907,717,866. Such is the vast empire of population and wealth to which Louisville has access by means of river navigation. Now if we add this to the new field, just being opened south of us, by railroads, and that north of us, reached by the same means, we shall have territory and stimulus enough to satisfy the most ambitious people in the world.

As regards access to sea-ports, no inland city is better situated than Louisville. She has river navigation to New Orleans; and railroad connection with Mobile, Pensacola, Savannah, Charleston, and other ports south, and also with all the eastern cities. For all heavy goods, and such as require to be little handled, our noble rivers give an easy and speedy transportation to and from the ocean; while our lighter wares can be transported to or from any one of half a dozen sea-ports, in a few hours. In a word, if any city in the valley of the Mississippi, has advantages in this respect, Louisville has more. She is nearer to the ocean both by land and water, than most of her sister cities.

Her direct connection with the lakes of the north, gives her every advantage that any of the western cities can claim for southern products in these regions. In fact, they must of necessity look to Louisville for their supplies of tobacco, and several other articles, which are cheaper and more abundant here than at any other city in the Mississippi valley. Moreover, Louisville occupies such a position that she is the half-way house between the North and the South. If the people of the States north of her wish southern products, Louisville is their nearest and most reliable market to buy in. If those south of her wish northern products or manufactures, Louisville is their nearest and best market to purchase in. Being the half-way house, she is also the connecting link between the northern and southern States. From Louisville, the railroads to the north spread out in every direction, and her own great roads to the south put her in connection with every point in that direction. This is the best place to cross the river with a railroad bridge, or tunnel, either, that can be found between Pittsburg and its mouth. At other points, the rise of the river is about 70 to 75 feet, here it is 40 feet, making a difference of 25 to 30 feet in favor of Louisville. Again, the banks are correspondingly lower here than where the floods are confined to a narrow channel, and hence the approaches to the bridge or tunnel are much easier; and besides this, the foundation is laid, and has stood since the world began; and it is so laid, that in summer it is as dry and convenient as it is on the upland. Here, then, above all other points, ought the great connection to be formed between the northern and southern systems of railroads. It is in the direct line, possesses greater local advantages than any other place, and will affect river navigation less than any where else.

TOPOGRAPHY.

The beauty of the Ohio river struck the early French explorers so forcibly that they called it "*La Belle Riviere*." And its clean, pebbly, and wooded shores, graceful curves, placid waters, and gentle current, have been celebrated in story and in song for two generations, and ever since the red men reluctantly turned their faces from it to find a retreat from the white race in the forests toward the setting sun. The river is not more beautiful than the valley through which it flows. There is, perhaps, no country in the world of equal extent,



FIRST BAPTIST CHURCH, CORNER WALNUT AND FOURTH STREETS.

which combines more of the elements of beauty and fertility than the valley of the Ohio. It is so extensive that several great and powerful States are mapped out upon it, and several millions of inhabitants call it home. No portion of this vast valley is richer or more beautiful than that embraced in the State of Kentucky. The plains, covered at first with a variety of forest trees and cane, and now with a luxuriant sward of native blue grass, are among the most beautiful lands in the world.

The scenery about Louisville, though not grand, is strikingly beautiful; and air, earth, and water, unite their charms in producing a landscape so beautiful that the eye of the beholder is at once arrested and delighted. In the notes appended to Mr. J. Brooks' map of the falls, made in 1806, the author says: "The land in the vicinity of the rapids, on both sides of the river, is generally of the first quality, and so shaped as to afford beauty with convenience. That part situated within view of the rapids is *beyond description delightful*."

Twenty miles above the city may be seen the river-hills on both sides of the stream, and about their usual height, 300 to 400 feet above the level of the river. A little further down, they are perceivably lower, and at Utica, eight miles above Louisville, they suddenly retire from the river, on the Indiana side, and are seen no more until we pass below the city of New Albany, where they come in again, presenting a bold, steep front, only a few hundred yards from the river bank. On the south, or Kentucky side, the hills continue in place until they reach the upper end of the city, but gradually decrease in height until, at the reservoir of the water-works, one mile above the city, they are not more than 130 feet above the level of the river, and at the upper end of the city, they are nothing more than a beautiful grass-covered slope of about 50 to 75 feet above the plain on which the city stands, and the elevation is here called the *bluff*. Here the bluff suddenly recedes from the river, turning first nearly due south, then gradually west of south, and finally sinks to the level of the plain when about south of the center of the city, and six or seven miles distant from the river. We see no more of the hills on this side until we go below the mouth of Salt river, twenty-one miles below the city. There they come in again as high as ever. These hills are every where composed of lime-stone, regularly stratified, the strata being from a few inches to two and even four feet in thickness. It is usually of that description called gray or magnesian lime-stone, and is extensively used for building purposes.

The vast plain, formed by the subsidence of these river hills, is about thirty miles long from east to west, and nearly as wide from north to south. Through it, from east to west, runs the Ohio river. It is not a low, marshy bottom, but a high, dry plain, being 70 feet above the river; and having a sandy soil, with a deep bed of gravel beneath it, it is both dry and fertile. Its soil is well adapted to horticultural and fruit raising purposes, and some of the finest market gardens in the world may be seen around the city on this plain.

Between the river and the hill, above the city, there is a beautiful plain about one mile wide and ten miles long, having for the most part a bold, high, and clean shore, and improved with farms, orchards, and dwellings. Harrod's Creek, a fine mill stream, coming down from a charming rich country, enters the Ohio through this plain, eight miles above the city. The hill back of this plain presents a feature of great beauty, which is much enhanced by farm-houses, improved grounds, and the great reservoir of the water-works. The reservoir crowns the top of this hill, one mile above the city, and when completed will, with its terraced walks, grounds, fountains, and lakes, rival Fairmount.

From the point where the hill retires southward, at the upper end of the city, there runs a beautiful swell or second bank, in a straight line, down to the bend of the river, entirely below the falls. It is simply the termination of the

plain on which the city stands, and between it and the river stretches a low bottom, which, as modified by the bend of the river, is about half a mile wide at the upper end of the city, gradually narrows down to the center of the same, and then widens to nearly its former dimensions. It is fully five miles long. At the upper or eastern end Beargrass Creek, coming in from the south, enters it, and turning suddenly westward, runs along the base of the bluff, near two miles, to the foot of Fourth street, where the creek enters the river. A few years since the city caused a cut to be made across this bottom, and the creek to be conveyed in a straight line from the bluff where it first enters it into the river; thus providing for the filling up of the old channel, which is being done. All that part of this low bottom from First down to Tenth streets, where it is only one square wide, that is, from Water to Main streets, has been filled up and built over many years ago. The point, as it is called, from First street eastward, is rapidly being filled up and improved. Many manufacturing establishments and extensive wharves are already constructed there. From Tenth street, where the bottom begins to widen again, as we go down the river westward, the canal runs through it a distance of two miles parallel with the bluff, and only a few yards from it. This bottom is never overflowed except by the highest floods.

The great feature of this beautiful landscape is yet to be described, namely, the river—the beautiful Ohio. It enters the great plain already described in a south-west course. At Six Mile Island it makes a slight bend to the west, and continues thence to the head of the falls, six miles, in a straight line a little south of west. For a short distance immediately in front of the city, its course is due west, then north-west to the foot of the falls or rapids, from thence to the lower end of the city of New Albany, say two miles, its course is a little south of west, and thence due south for a distance of two or three miles. From Six Mile Island to the foot of the rapids the river is nearly twice its usual width, being from one mile to one and a half, and is all within full view from the city wharf. This sheet of water, eight miles long and one mile wide—the last two miles occupied by the falls, the only interruption of the smooth surface of the Ohio in all its long course—with its palace-like steamers, its beautiful shores, and its populous cities, is a scene not to be forgotten by him who has looked upon it. Seen by moon-light, when the hum of the city is hushed, and the roar of the rapids falls on the grateful ear, it so tranquilizes and pleases the senses that one can hardly tear himself away. Approaching the city by night, on one of our magnificent mail-steamers, the view is enchanting. We have before us the broad river, the pretty shores with their rural loveliness, the distant cities on either side, and the long lines of gas-lights in front of Louisville, like stars in the diadem of night. It is a landscape combining all the elements of beauty in an extraordinary degree, whether seen by day or night. A most enchanting view is obtained from the great reservoir of the water-works on the hill, one mile above the city. The eye takes in Utica on the east, New Albany on the west, and the whole intermediate country, with its islands, falls, cities, river, villages, etc. etc. To stand on that hill and survey the vast and varied plain mapped out before the eye, with its thousand beauties, and its millions of wealth, the mind conceives for the first time, perhaps, the real beauty and wealth of this locality. We see so clearly the necessity for a bridge to unite the pretty thriving cities on either side of the falls, that we almost strain our eyes to get a view of its massive piers, and long and graceful spans across "*La Belle Riviere*."

About twelve miles south of the city there is a range of hills about 350 to 400 feet high, called the "Knobs." They rest on a stratum of slate, known by geologists as the black Devonian Shale. "Their summits are capped with soft free-stone, while the ash-colored shales, with intercolations of ennerinital lime-

stones, form their principal mass." See Report Geological Survey of Kentucky, vol. 2, p. 97. The free-stone of these Knobs is, no doubt, a fine building stone. We have seen it in heavy bedded strata two and three feet in thickness, a pure dark colored sand-stone, admitting of being wrought into all necessary forms, and working very smoothly. The fact that it is immediately along side of the Nashville railroad, and only twelve miles from the city, is a consideration of great importance in connection with this stone. These Knobs form the extreme southern border of Jefferson county. East and north-east of them lie the famous "Beargrass lands," environing the city. These lands form a high and very rich country, which abounds in fine bold springs of cold, clear lime-stone water. The country is highly improved, and presents a succession of the finest farms, substantial farm-houses, and tastefully improved grounds. In fact, wealth and taste are every where apparent. It would be difficult to find a richer or more elegantly improved section of country any where.

The citizens of this region are an intelligent, refined, and thrifty community, and generally remarkable for their hospitality.

GEOLOGY.

Jefferson county affords the best exposures of the calcareous rocks, under the black slate belonging to the Devonian period, yet seen. The projecting ledges on the bank of the Ohio river that appear in connected succession between the head and foot of the falls affords, probably, the best sections of these rocks in the western States.

We observe there the following succession and superposition:

1. Black bituminous slate or shale.
2. Upper erinoidal, shell, and coralline lime-stones.
3. Hydraulic lime-stone.
4. Lower erinoidal, shell, and coralline lime-stones.
5. Olivanites bed.
6. *Spirifer Gregoria* shell and coralline beds.
7. Main beds of coral lime-stones.

These beds rest upon a lime-stone containing chain coral, which is seen just above the lowest stage of water at the principal axis of the falls, where the waters are most turbulent. Only a portion of the lower part of the black slate is seen immediately adjacent to the falls. Its junction with the upper erinoidal bed, No. 2, of the above section, can be well seen below the mouth of Silver Creek on the Indiana side, where there is a thin, hard pyritiferous band between the black slate and lime-stone, containing a few entrochites. Three subdivisions may be observed in the upper coralline bed, No. 2, of this falls section:

(a.) White or yellowish white, earthy fractured layers, containing, besides *crinoides a Favosites*, a large *Leptæna* and *Atrypa prisca*, with a fringe.

(b.) Middle layers containing also a few *Cystiphyllæ*.

(c.) Lower layers, containing most *Cystiphyllæ*, and on Corn Island, remains of fishes. This is what has been designated as the Upper Fish Bed. These erinoidal beds contain a vast multitude of the remains of different species of encrinurids, mostly silicious, or more so than the imbedding rock, so that they often project and appear like black concretions. * * * * *

Time has not yet permitted a thorough investigation into the specific character of the numerous beautiful fossil-shells, corals, and fish remains which occur at this highly interesting locality.

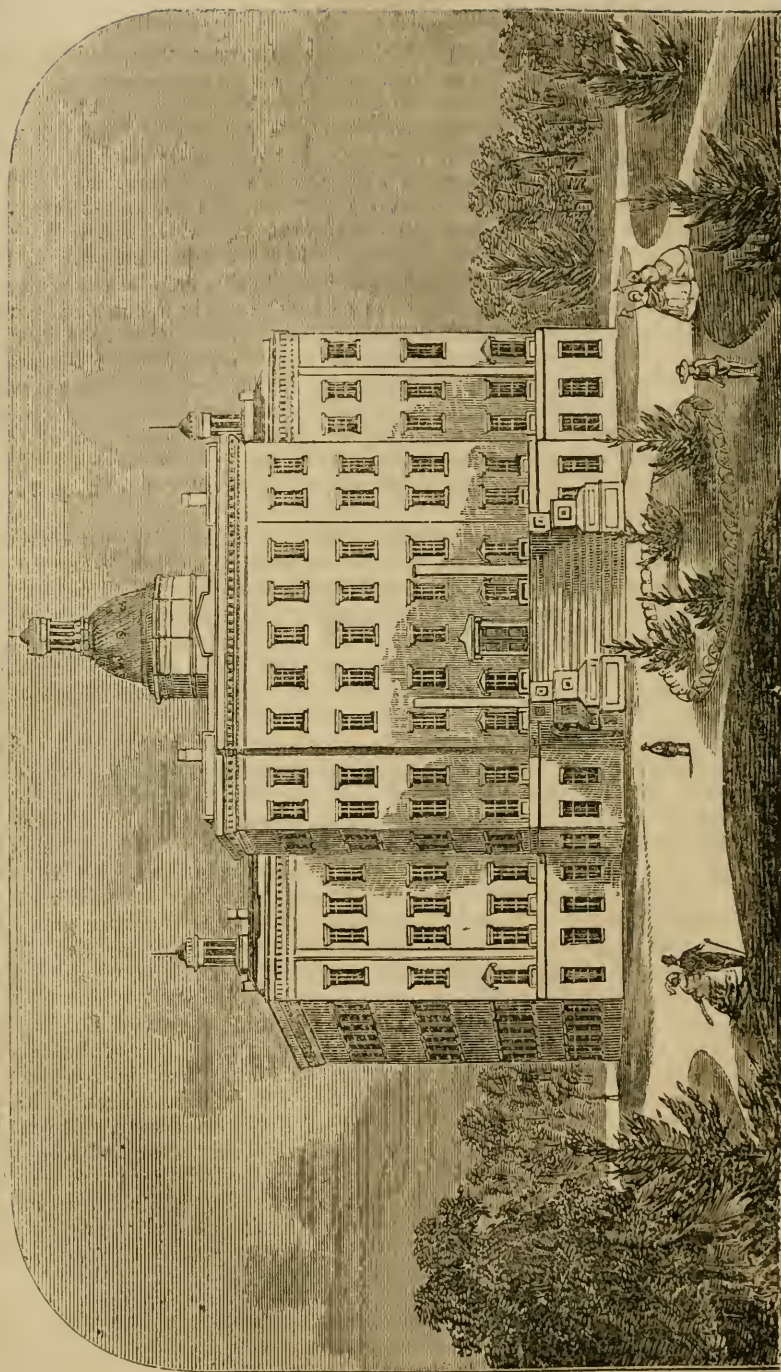
The hydraulic bed, of which such large quantities were excavated out of the Louisville canal, and have since been extensively manufactured into water cement, and sold throughout the western country for all purposes for which such cement is applicable, is an earthy lime-stone of a slightly bluish-green ashen tint, with an earthy flat conchoidal fracture. It contains, as its principal and characteristic constituents, 28.29 parts of lime, 8.87 of magnesia, and 25.78 per cent. of earthy insoluble silicates, of which 22.58 is pure silica. It is particularly worthy of note that the lime and silica in this celebrated and well known cement rock, are exactly in the proportion of their equivalent, proving, most conclusively, that its hydraulic properties are due to this definite chemical relation of these substances, which, after the rock is properly burnt and ground, unite, in connection with the water, to form a hydrated silicate of lime, in which there is one equivalent of silicic acid united to one equivalent of lime, which acts as a powerful cement to agglutinate the grains of sand added in the mixed mortar, which is usually three times the bulk of the hydraulic lime employed.

As yet we have no good detailed sections of the upper silurian beds of Jefferson county, lying between the upper chain coral bed and the magnesian building stone. See Report of Geological Survey of Kentucky, vol. 2, p. 70 and pp. 97, 98.

The magnesian building stone alluded to in the able report just quoted, is found in heavy bedded strata in the bluff, on the eastern and south-eastern edge of the city. It is apparently inexhaustible, and is extensively used for building in the city. The strata are from one to four feet in thickness, and we think we have seen it five feet thick. This stone would be more durable if it was a little more compact and hard, but is a blessing of almost incalculable importance to the city as it is. The ease and cheap cost of procuring this stone adds much to its importance.

Immediately under the city there seems to be a depression of the strata, forming an immense basin, which is filled with coarse gravel and sand to the depth of from 50 to 100 feet, with a stratum of rich loam and sand resting on the top of it. The gravel is clean water-worn pebbles and coarse sand, and sometimes comes within a few feet of the surface, at others it is 15 to 20 feet below the surface, owing most probably to the inequalities of the surface. At Dupont's Artesian well, which is only a few rods from the canal, where the solid rock had to be blasted in making a channel for boats, it is 76 feet through the gravel bed to the rock. It is in this immense bed of clean gravel that we find the inexhaustible supply of cold, limpid water, which furnishes the whole population of the city.

In the south edge of the county, and in the adjoining county of Bullitt, there is found a very superior iron ore. At present two furnaces, one of them on the Louisville and Nashville railroad, are working this ore. The pig-iron made by these furnaces is superior to any other iron received in this market. This ore is found in the "Knobs" skirting the south of Jefferson county, and running through Bullitt. These Knobs are also capped with heavy strata of free-stone. Much of this stone is destined to be used, no doubt, for building purpose in this city. It is near the city, and so convenient to two railroads that it can be furnished at small cost. It is believed by many that it is equal to any building stone we can get. It is easy to work, will take a very good polish, and stands the weather remarkably well.



KENTUCKY INSTITUTION FOR THE BLIND, EAST MAIN STREET.

DESCRIPTION OF THE CITY.

Louisville is situated on the southern bank of the Ohio river, in Jefferson county, Kentucky, and immediately opposite the Falls of said stream. The city is in latitude $38^{\circ} 3'$ north, and longitude $85^{\circ} 30'$ west of Greenwich. It is on an elevated plain, seventy feet above the river, and out of reach of the highest floods. The plain stretches out above, below and south of the city, many miles, and is remarkably fertile. Being highly improved, it presents a lovely prospect of fields, orchards, vineyards, gardens and beautiful dwellings with grounds laid out and ornamented with much taste. Every avenue leading from the city presents to the eye of the traveller a ravishing view of rural beauty and elegant refinement. This region is well adapted to the culture of fruit, and produces apples, pears, peaches, plums, grapes, etc., in great variety and perfection. Perhaps no city in this country is better supplied with choice fruits than Louisville.

The city is laid out on a scale of magnificence naturally suggested by the vastness and beauty of the plain on which it stands. The principal streets, running east and west, are from sixty to one hundred and twenty feet wide, and run the whole length of the city proper—about four miles—without a curve. These are crossed at right angles by thirty-five others, equally straight, and about one and a half or two miles long. The cross streets are of uniform width, viz., sixty feet. The side walks are from twelve to twenty-five feet wide, and set with shade trees, except in the business portions of the city. The streets vary from a perfect level only sufficient for good drainage; and thus, being straight, wide, level and set with trees on both sides, they afford some of the finest views we have ever seen. Almost any of them, after we get beyond the business part of the city, are beautiful enough to charm the beholder. To walk these streets beneath the embowering trees on a summer's day, and breathe the soft south wind, and smell the sweet flowers in each door yard, is enough to exert admiration from any one.

The squares, formed by these straight and wide streets, are from four hundred and twenty to five hundred and twenty-five feet between the cross streets; and from four hundred and twenty to one thousand feet between those running east and west. These immense squares are laid off into half acre lots, that is, one hundred and five feet front, by two hundred and ten deep. This was the size of all the lots originally, but they have been divided, of course, in the business part of the city. Through the middle of each square there runs an alley, to afford convenient ingress and egress for carriages. These alleys were ten feet wide originally, but in some instances they have been widened to twenty and even thirty feet, and dignified with the name of streets.

The large size of the lots affords room for gardens, fruit and ornamental trees, shrubbery and flowers; and for what is of more importance than either of these, viz., a free circulation of air. From the great depth of the lots, however, they may be subdivided in front, the circulation of air can never be materially interrupted. Ample provision was made in the original survey of the town for a park and public squares. A slip one hundred and eighty feet wide, and running from one end of the city to the other, was reserved for a park. It included the ground between Green and Grayson streets. It was laid off into lots and sold by the Trustees, without any legal authority, before land was valuable enough, or the town large enough, to induce the citizens to inquire into it. When they did inquire, it was only to find they were too late, and that the park was lost to the city forever. This loss, though great, is less felt here than it would be almost anywhere else, owing to the magnificent streets, alleys, and immense squares, described above. The depth of the lots being so great, admits of setting the dwelling houses fifteen or twenty feet back from the street, and

thus a front yard of flowers and ornamental trees is seen before almost every house. This gives an appearance of rural beauty to the city superior to any place of its size we have ever seen.

The parks of Philadelphia are indeed very beautiful, but we must leave the street to enjoy their refreshing shade and sylvan beauty. We look in vain along her clean streets, of uniform brick walls, white window shutters and marble door steps, for any green tree, grassy yard, or flower plat to relieve the eye or refresh the feelings. The same remark is true of New York, and in fact, of all large cities that we have seen. Louisville, though not a very populous city when compared to those named, covers an immense space, more than any city of her population in the country, and in consequence of the grand scale on which the city is planned, she has, and may always retain, this peculiar and charming feature. We never knew any one to visit our city, and ramble beyond the business streets, that did not express surprise and admiration at the rural beauty everywhere visible.

There are sixty miles of paved street and forty miles of paved alley, much of the latter twenty and even thirty feet wide. Thus we have one hundred miles of paved carriage way in Louisville. The longest paved street is five and a half miles in length. The greater part of the paving stone used is the grey limestone common about the city, but of late years much use is made of boulder stones for paving, and they will doubtless soon take the place of every other material. The curbing is of limestone, in blocks or slabs from three to ten feet long, dressed to a face of five to eight inches on the top, and let into the ground two and a half or three feet. An immense amount of new curbing and sidewalk have been done the past season in the older parts of the city, to make them correspond with the newer streets.

The entire city stands on a stratum of sand, or clay and sand, the surface of which is a rich loam, or warm fertile soil. Two or three feet below the surface pure sand is generally found, resembling river bar sand, both in cleanliness and in the manner of superposition. Beneath the sand is found a very deep substratum of clean gravel. This gravel is of water worn pebbles, mostly white and crystalline, and coarse, clean, white sand. The depth of the upper stratum varies from five to twenty feet. The depth of the bed of gravel we have no means of ascertaining, except at Dupont's Artesian Well, that being the only place where it has been penetrated to the rock beneath it. Here it is seventy-six feet deep. The Artesian Well is within a few rods of the canal, which was excavated through a bed of solid rock. From this it is manifest that the rocky bed of the falls either suddenly stops on the southern bank of the canal or dips southward at an angle of near forty-five degrees. If the latter supposition be correct, then the bed of gravel must be much deeper under the city than it is at the well, which is on the northern edge of the city. This question being one of practical importance, as well as of theoretical interest, deserves thorough investigation, and we sincerely hope Dr. Owen, our very able State Geologist, will give it early and thorough attention. Perhaps no man living is better qualified to do it than he is, as his able reports, already published, will show.

The sand, above noticed, furnishes an excellent building material, and derives additional importance from the fact, that the digging of a cellar generally furnishes all the sand necessary to complete the building. Owing to this sand, cellars are dry and tidy, being almost as pure and healthy as rooms above ground. Some of the city breweries have cellars twenty or twenty-five feet deep, and lighted with gas, for storing their immense casks of beer and ale.

In the underlying gravel is found an inexhaustible fountain of cold, limpid water. From this fountain hundreds of wells are constantly supplied, and many of our citizens believe we are indebted to this supply of pure limpid

water for the extraordinary health of the city. Everywhere in the city it is found at the depth of fifty or sixty feet, but immediately on the border of the city, east and southeast, we have the heavy ledges of limestone, in which the water is not found, or not without a heavy expense of blasting the rock. The possession of this water made our citizens very reluctant to erect water works, for beside the vast expense of the works, they feared the river water would not be so pure or so healthy as that of the wells. Perhaps our singular exemption from epidemics, and general good health, is due more to the peculiar geological formation of this region than to anything else. For since the drainage and filling up of the ponds originally found here, which were caused by the immense beds of leaves and other vegetable matter which accumulated in the low places of the plain while the forest was standing, the sand and gravel absorbs all moisture, and diseases resulting from miasma have nearly disappeared, and when present are greatly modified.

The public pumps being very numerous, easily worked, and always kept in order, afford cheap, pure and abundant supplies of water; and being very clear and cold, it needs neither filtering nor ice. Thus the poorest families have water fit for a prince, literally without money and without price. No other city that we know of, has such a supply of pure cold water as Louisville. We do not believe that there is another such in America. What adds to the importance of this water, is the fact, that it is easily obtained in any part of the city, no instance of failure having ever been met with. Of the thousands of strangers who have used it, we never heard any object to it, except on account of it being limestone, or "hard" water. But this objection has more to do with the taste than anything else, and seldom produces any sensible effect on the systems of even those who have been accustomed to drink soft water. A few days suffices to make strangers fond of it, and when once used to it they find no other water so sweet and refreshing as that from the city pumps. As, however, hard, or limestone water is not suitable for manufacturing,—is injurious to steam boilers, and to steam machinery generally,—it was urged that the interests of the city demanded a supply of soft or river water, and after voting down the proposition to erect water works several times, the matter was compromised by the passage of an ordinance that secures well water to all who prefer it as now enjoyed, for all time to come, and the citizens voted in favor of an appropriation of money to erect water works. They are now being erected, and on a scale that will be equal to any demand. They are in a forward state of progress as may be seen by reference to the article on Water Works.

Owing to the canal being too small to pass the large boats up to the main wharf, the city has, at heavy expense, constructed a fine wharf at Portland. There all the largest and finest steamers receive and discharge their cargoes, except when the river is high enough for them to pass over the Falls. Thus Louisville has two wharves, one for the small and up river boats, and the other for the large and lower river boats. A stranger, on looking at either of these wharves separately, would be led to a wrong, and rather disparaging conclusion as to our tonnage. He sees but half of it. This circumstance causes considerable inconvenience, requiring the transportation of freight and passengers a distance of three miles by land. We are glad to say, however, that much attention has been bestowed, and money expended, to lessen this inconvenience as far as practicable. Two fine wide streets, lately bouldered all the way through, accommodate scores of omnibusses and coaches, which run day and night, for the accommodation of the public. Besides these, there is a horse car railroad, the track extending from Twelfth street to the wharf and ferry landing in Portland. At Twelfth street a line of omnibusses connects with the cars, and runs to the upper end of the city on Main street. The cars and omnibusses belong

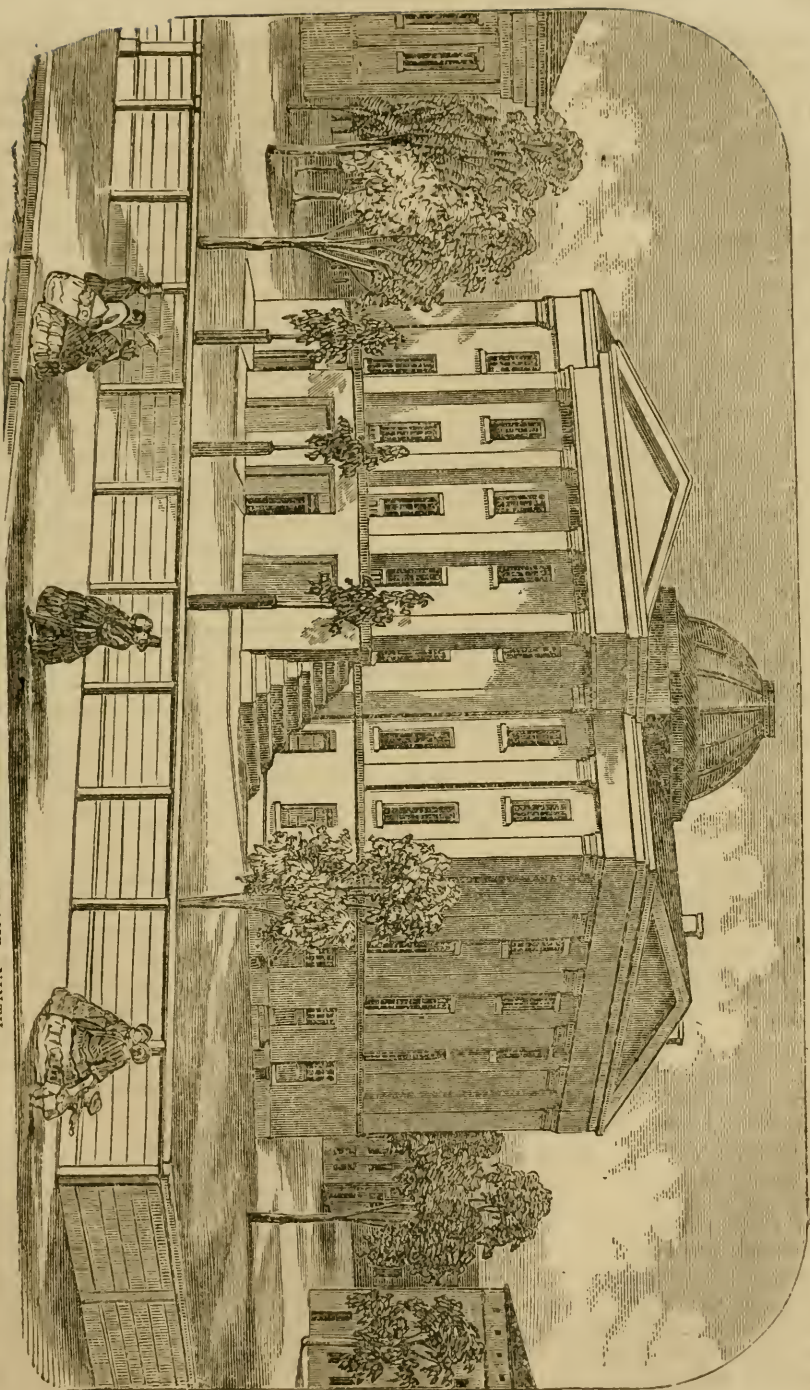
to the same company, and they carry passengers the whole distance, from Wenzel street to Portland—a distance of five and a half miles—for ten cents. A person can ride from one end of the omnibus route to the other—two miles—for five cents, and also in the cars from Twelfth street to Portland—three and a half miles—for five cents. The company run their omnibusses and cars every ten minutes, during the day, and every half hour after night. They also carry freight on their road on equally easy terms. This is a great public convenience, and we are glad to see it so well sustained. The fine flourishing city of New Albany being opposite to Portland, the business of all these highways is continually on the increase.

Soon, however, we hope to see an end of the troublesome transportation of the thousands of tons of freight around the falls. Already the initiatory steps have been taken to enlarge the canal so as to pass vessels of the largest class. The locks on the extension will admit boats three hundred feet long. It is expected that the work will be commenced this year. Few things will more facilitate the commerce of our city or that of the entire Ohio river.

The wharf of the city proper, that is, the upper wharf, is now being greatly improved and extended. Since the turning of Beargrass Creek into the river, two miles above its old mouth, and thus reclaiming its bed for that distance, an immense sewer has been commenced on the south side of the old channel at its mouth, and the creek is filled up and the wharf built over it. This is a timely and valuable improvement. A vast increase of business is certain to be realized at this wharf within a year or two, and it is wise to provide the best accommodations for it that is possible. The wharf has been extended up the river also, and is being filled up, so as to place it quite above the highest floods. These are very important improvements, and we trust will continue to receive due attention by our city government, until they shall be completed in the very best manner. Let the wharf, from end to end, present the clean, substantial, and inviting appearance of a real commercial city, and not look as if our town had turned its back upon our palace-like steamers, and sought the river only as a receptacle for filth and offal. The unsightly appearance of that filthy, oozy creek, and its equally filthy surroundings, have been an eye-sore to all strangers, and it has been so long enough. The sight of it has done more, perhaps, to impress strangers unfavorably toward Louisville, than anything else about the place. Nor can we wonder at it, for we ourselves would be unfavorably impressed were we in their stead. Think of it, that unsightly public landing, the first thing every stranger sees on setting foot on our shore! If we enter a house and every child that meets our view has an unwashed face and an uncombed head, no matter how fine the parlor may be, no matter how many apologies madam may make, our minds are made up, we have received our impression. Then let the abominable nuisance be removed with all convenient dispatch. Let the city's face (front) be washed. All praise to our city authorities for what they have done, and may they never stop till all is done that can be done to present a high, dry, clean, substantial and extensive river front—a wharf worthy of, and equal to, all the business we may have to do.

The public buildings of Louisville, though not of the most costly character, are nevertheless very creditable. The Court-house, for both county and city purposes, now being finished at the expense of the city and county jointly, will when completed, present a very imposing appearance. The U. S. Custom House, Masonic Temple, Hospitals, Blind Asylum, Medical Schools, High School, Cathedral, First Baptist Church, First Presbyterian Church, Walnut Street Methodist Church, St. Paul's Episcopal Church, First Congregational Methodist Church, Brook Street Methodist Church, Chestnut Street Presbyte-

HIGH SCHOOL, CHESTNUT STREET, BETWEEN EIGHTH AND NINTH.



rian Church, and the City School Houses, eight in number, are the largest and most important of the public buildings.

The market houses are six in number, five in the city proper and one in Portland. They are all situated on Market street, and are built with iron columns on stone pedestals. They have arched ceilings, and are well lighted with gas. Being in the middle of the street, those first built left hardly as much room for carriages to pass as was necessary; hence those built later, were provided for by widening the street, where they are situated, twenty-four feet, thus making it one hundred and fourteen feet wide at all the markets except the two first built. They are regarded as models of market-house architecture, being light, airy and graceful. They are kept very clean, and are open every day in the week except the Sabbath, and also on Saturday evening until nine o'clock. They are well supplied with flesh, fish, fowl, vegetables and fruit. Beef, mutton and pork, equal to any in the world, can be had here. Vegetables, in great variety and abundance, are every day exposed in tempting profusion and excellence. Fruits, of all sorts, and of excellent quality, may always be found here in their respective seasons. We cannot forbear quoting the following remarks from Dr. H. McMurtry's *Sketches of Louisville*, written in 1819. The Dr. says: "With respect to fruit, it is perhaps unequalled by any in the United States. Peaches of great size and beauty, such as bring six and a quarter cents each in the Philadelphia market, are sold here for fifty cents per bushel. Apples, without exception the finest I have ever seen, are sold at the same price in the fall, and at two dollars per barrel in the winter. Grapes, melons of various kinds, cherries, raspberries and strawberries are to be had in their respective seasons." These remarks are as true of our fruit market now as they ever were, with the single difference that we have more of it, and of better varieties now than ever before. Prices here will compare favorably with any other market in America for cheapness.

SCHOOLS.

The school systems of this country are among the highest and strongest evidences of its progressive civilization. Confined for many years to the older States of the Union, there is now hardly a single member of the confederacy that does not take an honest pride in its public schools. In this respect Kentucky is not behind the times, her system of education being one of the prominent features in her internal legislation. A large sum is thus annually distributed, each school district receiving its quota, which serves as a nucleus for the establishment of the district school, the balance being made up by subscription. The success of the school is thus an index to the intelligence and public spirit of the inhabitants of the district.

Louisville draws from the school fund about \$14,000 annually; a tax is also levied upon her citizens for the support of the public schools, of about twenty or twenty-one cents upon every hundred dollars worth of taxable property. This tax yields a revenue amounting, with the sum received from the State, to nearly \$70,000, which is devoted exclusively to the maintenance of the public schools as provided for in the city charter.

There are ten ward school houses, and most of them are large buildings, being about eighty by one hundred feet square, and three stories high. Besides being ornaments of architectural elegance and magnitude, they are well arranged into comfortable apartments, with free ventilation and easy ingress and egress. They are furnished with maps, desks, black boards, and every convenience for

the health, comfort and study of the children. Each of these buildings can accommodate from seven to eight hundred children. In these schools all the children of the city may be educated without expense to themselves or their parents; the child of the poorest man having the same rights, and the same opportunities of becoming an educated man or woman as the child of the wealthiest. The schools are divided, first into male and female departments, occupying different portions of the building, and accessible by different entrances. These two departments are, however, subdivided into three distinct grades of schools, viz: the primary, secondary, and the grammar school, each being separate and distinct from the other in every particular.

To give a clear idea of the working of the system, it will be well to follow a child through the different grades of schools and the studies pursued in each: The only conditions of entrance to the school are that the child be a resident of the ward and six years old. He then enters the primary school where he learns to read and spell simple words and lessons, and commits the multiplication table. He is then prepared for the secondary department where he advances in his course of reading and spelling, and commences writing, mental arithmetic and geography, remaining in the department from one to two years, when, after an examination, he is admitted to the grammar school. Here he pursues the same studies as before, though of course in more advanced text-books, excepting mental arithmetic, which is given up altogether, while written arithmetic (which he had commenced in the secondary department), takes its place. He now commences the study of grammar and the other branches of a common English education, including algebra. Here he may remain until fitted to go into business, or prepared for the High school. The same course is followed in the case of females; the different departments corresponding in name and degree to the schools for males. It is proper to mention here, that in three wards of the city German is taught by teachers who devote themselves exclusively to this branch of education. These wards are the first, second and eighth, in which the German population is very numerous.

It is now three years since the clause in the Charter, requiring the establishment of High Schools, was complied with, and they have fully won for themselves a reputation that proves the wisdom and foresight of those who urged their establishment. The Male High School is conducted by four Professors, one of whom is the Principal. Each Professor occupies a separate room, and is engaged in teaching one of the following branches, viz: Rhetoric, History and Belle Letters, Mathematics, the Classics and Modern Languages. The students are received annually, there being four classes, one of which graduates every year as another is admitted. The course of study thus occupies four years, and though quite comprehensive, is remarkably thorough. The Professors are all highly cultivated men, and devoted to the interests of the school.

The Female High School occupies a building near the centre of the city on one of the most beautiful streets. This school is conducted by a Principal, a Professor of Modern Languages, who also devotes half his time to the Natural Sciences, a Preceptress, and a Female Assistant. The school is divided into three classes or grades of pupils, the time spent in the course of study being three years, one grade graduating and another entering each year. The course embraces Latin, Rhetoric, History, Mathematics, French, the Natural Sciences, Extempore Composition, and the careful reading and analysis of the English language. Pupils from the Grammar schools are alone eligible to a place in this school after undergoing a rigid preliminary examination. The number of applicants for admission is always very large, and it is a cheering fact that the number of successful applicants, who have stood the test of the annual examination, is increasing rapidly.

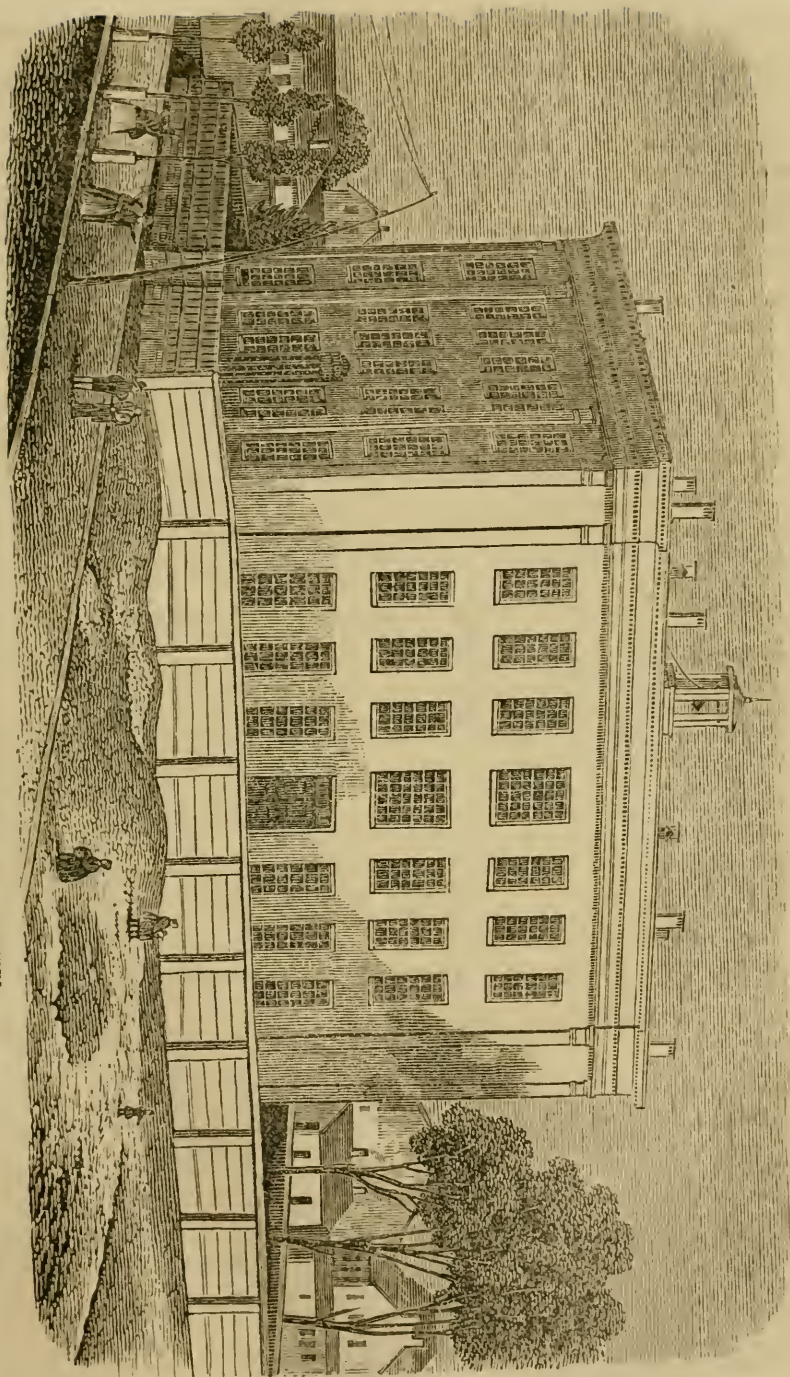
The whole school system is under the charge of a Board of Trustees, elected by the people. This Board meets on the first Monday of every month and transacts all the business of the school system. They annually elect a Secretary, who acts in the capacity of Superintendent of public instruction; his time being spent in visiting the schools and attending to all details of business.

Besides the very extensive and well conducted system of free schools, we have a large number of private and denominational schools. We have Roman Catholic schools, male and female, Protestant Episcopal schools, Presbyterian and other denominational schools. Some of these schools have fine school buildings, built expressly for the purpose. They are well adapted to educational purposes, and are also imposing ornaments to the city. St. Aloysius College, is a Roman Catholic school for males, of some celebrity. It is under the care of the Jesuits, and has six professors and several tutors. The Cedar Grove Academy is a popular Roman Catholic school for females, having fine buildings and spacious grounds; it is situated in Portland. The Presbyterian Female Academy is, with its spacious grounds, situated in the midst of a beautiful part of the city, and is an object of interest to every beholder. Great liberality and zeal have been displayed by the friends of this noble enterprise. The Louisville Female College is another school of high grade, and conveniently located, in spacious buildings well adapted to the purpose. This school is not a denominational one, yet its moral and religious tone are equal to any school in the country. It is regularly chartered by act of the Legislature of Kentucky with full collegiate powers.

There are numerous other schools for both males and females, of a high order. Such as Mr. Butler's excellent school for females; Messrs. McBurnie and Womack's high school for boys. These gentlemen are all thorough and accomplished teachers of long experience. There are several excellent schools in the vicinity of the city also, for instance, Bishop Smith's, for females, and Rev. Mr. Beekwith's, also for females. We also mention the Jefferson Academy, under the management of Rev. G. W. Brush, and located at Middletown, convenient to the railroad; this is a first class school for females. In the same neighborhood is Rev. B. H. McCown's school for males, a classical school of high order.

There are two Medical schools, viz: The Medical Department of the University of Louisville, and The Kentucky School of Medicine. These institutions are ably conducted by thorough and accomplished Professors. Our limits do not allow of the extended notice which their merits deserve, but we must say, they are deservedly popular, and the city and the State may well be proud of them. The Law Department of the University of Louisville, is also an institution of high character, and speaks well for the liberality and good taste of the city. Its professors rank among the ablest lawyers and jurists of this country. It is deservedly a very popular law school. There are two Commercial schools, viz: The Louisville Commercial College, and The Louisville Mercantile Academy. Both are ably conducted by competent Professors. There are usually about one hundred and fifty or two hundred young men in attendance at these schools.

FIRST WARD SCHOOL HOUSE, MARKET STREET, NEAR WENZEL.



DU PONT'S ARTESIAN WELL,

Report, Analysis and Medical Properties of its Water, by PROF. J. LAWRENCE SMITH, M.D., of the Medical Department of the University of Louisville.

The Artesian Well, forming the subject of this report, is one of the most interesting objects of the kind to be found in any part of the world. It was undertaken by Messrs. C. I. & A. V. Du Pont, of this city, prosecuted with great energy and large expenditure, and accomplished in a much shorter time than any similar undertaking of the same magnitude. The practical skill of Mr. Blake directed the construction of the efficient machinery employed, and so successful was he in the superintendence of the operations, that not a single detention was experienced from the commencement to the termination of his labors.

The citizens of Louisville were not aware of what was going on in their midst, until some time in the month of August, 1858, the public prints announced, that at the paper mill a jet of mineral water was pouring forth in vast volumes from a boring two thousand and eighty-six feet in depth.

In giving an account of Du Pont's Artesian Well, it will, no doubt, interest many to learn something as regards the nature and history of Artesian Wells. The principal difference between the ordinary and Artesian Wells, is, that the latter is very much smaller in diameter than the former, and penetrates the earth to a much greater extent.

In digging the ordinary well the instruments employed are the spade and pick, or blasting with gunpowder when rock is penetrated. To form an Artesian Well, very different instruments are employed, some are not unlike an auger, but the more usual ones are in the form of chisels. It is proper to commence by erecting a tall shed over the spot where the boring is to take place, some thirty or forty feet in height and eight or ten feet square at the base, gradually diminishing in size upwards. This is done for the convenience of elevating and storing away the long rods used in making these wells. Long rods of hickory, or other strong fibrous wood, are procured; they are from one and a half to two inches in diameter, about thirty feet in length, and so arranged at their extremities by iron casings as to be easily and securely fastened to each other, while they admit of being equally readily detached. It is to the extremity of the rod that the chisels and other excavating tools are attached, as also the long, narrow bucket for taking up the loose materials detached by the excavating tools. Mechanical arrangements are next made for hand, horse, or steam power, to give an up and down motion to the rod, of fifteen to twenty inches, while a slow, circular motion is given to it by some one standing over the boring.

Thus furnished, it is best when the nature of the ground admits of it, and it is expected to go to a considerable depth, to commence by sinking an ordinary well four or five feet in diameter, and ten to fifteen feet deep, provided it can be done without interruption by water; next, attach one of the tools to the end of the rod, and pierce the ground with a hole, varying from two to nine inches in diameter. Most commonly, if the well is expected to be of great depth, it is commenced with a calibre of from five to nine inches, and afterwards diminished to three or four inches, or even less. If the boring passes through sand, or loose material, it becomes necessary to place in the well strong tubes to sustain the sides, as otherwise, the loose material becoming detached, may at any time fill up the boring; in this way the well at Charleston, South Carolina, was, on one occasion, filled up one hundred and forty feet in a single night. When the boring is through rock, tubing is not usually required.

The supply of water to Artesian Wells follows the same law as other wells and springs, viz: The water rises in them to no greater height than that of the source. In this city the water rises in the ordinary wells to within forty feet of the surface, for the simple reason that the level of the basin of water in the gravel under the city is that depth beneath the surface. In Artesian Wells, that are considered successful, the boring is carried to such depth that some vein of water is encountered, having its connection with a source much higher than the surface of the Artesian Well, thus insuring a flow of water above the surface of the ground. It does not, however, always happen that the water in Artesian Wells rises to the surface. Many of the salt wells in Virginia, and elsewhere, are of this character, and the water has to be pumped to the surface. There is a well of this last description, at Brighton, England, from which seven hundred gallons are pumped every minute. This method of forming wells is of very ancient date. The Chinese employed it one or two thousand years ago, but the introduction of it into one of the provinces of France (the ancient *Artesium*) during the reign of Louis XIV, is what has given the generally received name to this class of wells.

The more recent geological formations, as the tertiary and upper secondary, can be bored with better hopes of success than the older formations, but when the older strata furnish supplies of water, they are generally very abundant, for in the old secondary rocks are found those great chasms and caverns so celebrated in various parts of the world, for the rivers that flow through them, and are lost in them; as the cavern of Guacharo, in South America, which Humboldt traced for two thousand four hundred feet, finding all along its extent a river thirty feet wide, rolling along the floor of this magnificent cavern. In the cavern of Adelsburg, in Carniola, the river Pœck engulfs itself; it appears and disappears many times, and has been traced under ground, through an extent of six miles, as far as a large lake. The fountain of Vanclose also issues from subterraneous rocks, and pours forth a volume of thirteen thousand cubic feet per minute, even under ordinary circumstances, and this is sometimes increased to forty thousand cubic feet. But to us there is no more interesting cavern containing abundant streams than the far-famed Mammoth Cave.

In passing through the various strata, with the boring apparatus, it commonly happens that distinct sheets of water are penetrated, having no connection with each other; as for example, in the works which have been undertaken for the search of coal at St Nicholas Aliermonde, near Dieppe, in France, seven great sheets of water were passed through. In coming upon the seams of water in Artesian Wells, it may be that they merely percolate porous sand rock, or they are regular caverns in the rock, varying in depth from a few inches to twenty or more feet.

The surface of the country in which these wells may be made successfully furnish no indications. In the province of France from which the name of these wells is derived, the water comes up in immense plains where no hill is seen even in the distance. Of course, the water comes from some point higher than the plain; it may be fifty miles distant, it may be one hundred miles or more, and where the geological formation of the country is the same we could hardly set a limit to the distance from which the water might come. In fact they are now boring successfully for water in the African deserts.

Considerable interest connected with these wells is the indications they furnish of the gradually increasing temperature as we descend into the earth; at different places there is a slight difference in the ratio at which the temperature increases. In descending from the surface of the earth by excavation we come to a depth at which the thermometer will stand at the same point all the year. At Paris, France, this depth is ninety feet, and the temperature 53° Fahr.; in

passing below this point the temperature gradually increases in a uniform ratio of 1° for every sixty-one feet of depth, so that the deepest excavation at that place, being one thousand eight hundred and six feet, has at the bottom a constant temperature of 81° . The ratio in Scotland is 1° for forty-eight feet of descent; the mean of seventeen wells in other places in Europe gives 1° for every fifty-three feet. The experiments made on the well at this place, taking the constant temperature at ninety feet to be 53° , show an increase of 1° of heat for every sixty-seven feet of depth. It is not the object of this report to enter upon speculation as regards the causes of the gradual increase of temperature.

The uses of Artesian Wells are various, as will be seen by reading the following extract from Tomlinson's Encyclopedia: "Artesian Wells have not only been employed for providing houses with water, but their waters have also been used as a moving power. In the village of Gonchem, near Bethune, there are four borings to the depth of one hundred and twenty feet; the waters are conveyed into the water course of a flour mill, and are also made to subserve agricultural purposes. The little town of Roubaix, near Arras, was in danger of losing its principal means of support, by its silk spinning and dye works, from want of water. Artesian Wells were sunk, one of which yields two hundred and eighty-three cubic yards of water per day, or double the power of a steam engine of twenty horse power. At Tours an Artesian Well pours two hundred and thirty-seven gallons of water per minute into the trough of a water-wheel twenty-one feet in diameter, which is the moving power of a large silk factory. In another place at Fontes, near Aire, the united waters of ten wells are made to turn the mill-stones of a large mill, to blow the bellows and to beat the hammers of a nail manufactory.

"The constant high temperature of these waters renders them especially valuable during winter, either as a moving power or as a means of thawing and washing away the ice which impedes the motion of water-wheels in time of frost. In Wurtemberg the water of several Artesian Wells is transmitted through metal pipes, arranged in large manufactories, and thus a constant temperature of 47° is maintained at a season when the external temperature is at zero. Green-houses have been heated in the same way, and Artesian waters have been applied at Grenelle as a source of warmth to hospitals and other public buildings. By introducing the water of Artesian Wells into fish ponds the extreme variations have been prevented. Artificial cress plots have also been formed and supplied by means of those wells with pure water of a steady temperature. The artificial cress plots of Erfurt produce a large annual revenue. Paper mills have also been supplied with the pure water of these wells at periods when the heavy rains have made the river water muddy. In the Department du Nord the fine linen used in the manufacture of cambric, lawn, lace, etc., is prepared from flax rotted in pools, which are supplied by Artesian waters; by their purity and invariable temperature, the soluble portions of the flax are more quickly removed, and the valuable qualities of the filaments retained in higher perfection. Such are a few of the advantages and practical applications of Artesian wells."

It is doubtless a point of interest to enumerate some of the more remarkable Artesian Wells, to contrast them with the one now under report.

The Grenelle Well, at Paris, was commenced in 1834 and completed in 1841, at which time the rod suddenly descended several yards, and shortly after, the water rose to the surface in vast quantities. For the first fifty feet the boring was twelve inches in diameter, which was reduced to nine inches and thus carried to a depth of one thousand one hundred feet; a farther reduction was made to seven and a half inches until the depth of one thousand three hundred feet

was reached; and a final diminution to six inches to the termination of the well at one thousand eight hundred and six feet. From the completion of the well to the present time there has been a steady flow of over half a million of gallons in twenty-four hours, of a temperature of 81° .

Kissingen Well in Bavaria.—This is even deeper than the Grenelle well, being one thousand eight hundred and seventy-eight feet; the last hundred and thirty-eight and a half feet passes through rock salt. From this well one hundred cubic feet of water gushes forth every minute. The water contains three and a quarter per cent. of salt.

Aire in Artois, in the monastery of St. Andre. This well was bored more than a century ago and has flowed steadily ever since. The water rises eleven feet above the ground and supplies nearly two hundred and fifty gallons per minute.

Charleston Well, in Charleston, South Carolina. This well has been sunk to the depth of one thousand two hundred and fifty feet, and yields thirty thousand gallons in twenty-four hours, flowing ten feet above the surface. Another is now being bored at the same place, twelve inches in diameter, and it has already reached the depth of one thousand feet.

Belcher's Well, in St. Louis, Missouri, was commenced in 1849, and completed in 1854. The water does not answer the purpose for which it was undertaken. The amount of water flowing from it is one hundred and eight thousand gallons in twenty-four hours. Its depth is two thousand one hundred and ninety-nine feet.

Lafayette Well.—An Artesian Well has lately been made in Lafayette City, Indiana, of a depth of two hundred and thirty feet. The water rises a few feet above the surface, with the flow of four gallons per minute. This is a mineral water, containing about four hundred grains of solid matter to the gallon. Dr. Charles M. Wetherill has lately made an interesting report upon it.

Du Pont's Artesian Well.—This work was commenced in April, 1857, from the bottom of one of the wells of the factory, that has a depth of twenty feet; the boring tools employed made a hole five inches in diameter to the depth of seventy-six feet from the surface; the boring was now reduced to three inches, and thus continued to the bottom of the well, a depth of two thousand and eighty-six feet. The flow of water is three hundred and thirty thousand gallons in twenty-four hours, and the elevation above the surface one hundred and seventy feet.

The rock struck, which geologically belongs to the "Devonian series," is for thirty-eight feet shell limestone, then for forty feet coralline limestone; at which depth the upper silurian is reached. Without being able to make out, with any degree of certainty, the amount of upper silurian passed through, we suppose it to be over one thousand two hundred feet. At the depth of one thousand six hundred feet a sand rock was reached, doubtless of the lower silurian, and ninety-seven feet deeper was encountered the first stream of water which reached the surface. This flowed out abundantly and with much force. The quantity not being sufficient, the boring was continued. After this, it was unnecessary to use the bucket to take out the material detached by the borer, the force of the water bringing up the fragments very readily. The water increased in quantity in going deeper, the increase being more marked at one thousand eight hundred and seventy-nine feet, and still more at one thousand nine hundred feet, when pieces of rock weighing an ounce or two came up with the water. The water increased every ten or twenty feet to the depth of two thousand and thirty-six feet; here a very hard magnesian limestone was encountered six feet in thickness. After which the sand rock reappeared, and for the next fifty feet there was no increase of water.

The following table exhibits the appearance of the rock as far as it is possible to make it out by the fine fragments taken out at different depths:

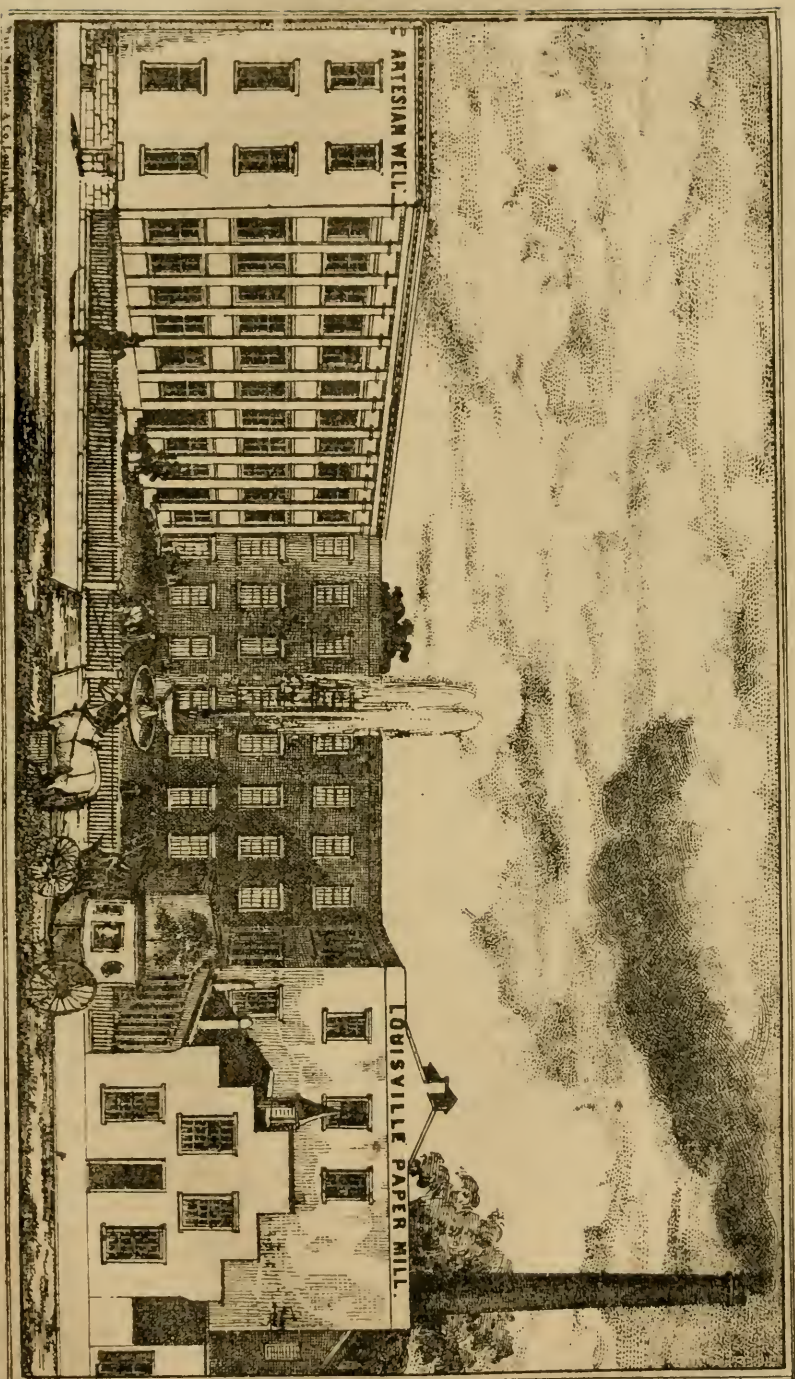
- For seventy-six feet, sand and gravel.
- Next one hundred feet, tolerably pure limestone, with fragments of fossils.
- Next twelve feet, soft limestone mixed with clay.
- Next fifty-two feet, tolerably pure limestone mixed with fossils.
- Next five feet, limestone with ferruginous clay.
- Next eighty-one feet, gray limestone.
- Next one hundred and ten feet, limestone mixed with clay.
- Next one hundred and forty-nine feet, tolerably pure limestone with many portions quite white.
- Next thirteen feet, clay shale with little calcareous matter.
- Next two hundred and seven feet, limestone with a little blue clay shale.
- Next thirty-three feet, same, a little darker and more shale.
- Next ninety-four feet, pure, very white limestone with fossils, alternating with very dark limestone (color likely from organic matter) with some dark shale.
- Next twenty-six feet, shaly limestone.
- Next forty feet, very light and hard pure limestone.
- Next one foot, white clay.
- Next five hundred and forty-six feet, gray limestone, alternating hard and soft.
- Next forty-one feet, sand rock, white.
- Next four feet, same, very fine and hard, with little limestone.
- Next sixty feet, same, with more limestone.
- Next seventy-two feet, same, with less limestone.
- Next three hundred and eight feet, same sand rock, with but little limestone.
- Next six feet, magnesia limestone, very hard.
- Next fifty feet, sand rock again.

At the urgent request of many citizens of Louisville, the boring was now stopped to give a fair test of the medical virtues of the water that was pouring forth at the rate of two hundred and thirty gallons per minute, or about three hundred and thirty thousand gallons in twenty-four hours. The water by its own pressure rises in pipes one hundred and seventy feet above the surface. The boring was accomplished in sixteen months, and the depth reached is two thousand and eighty-six feet, which depth we can better conceive of by referring to corresponding heights, as represented by spires in our city; imagine seven such spires as that of the Catholic Cathedral piled on each other. In order to conduct the water to the surface and prevent its passing off into the gravel beds below, a tube five inches in diameter leads from the surface to the rock, a depth of seventy-six feet, into which it is driven with a collar of vulcanized gum elastic around it. No tubing is found necessary for any other part of the boring.

When the size of the bore, (three inches in diameter,) and its depth are considered, the flow of water from the well is unequalled by any other Artesian Well yet constructed that flows above the surface, for although the Grenelle well at Paris delivers six hundred thousand gallons in twenty-four hours, it has at the bottom an area six times as great as the Dupont well, and a few hundred feet up seven times as great. A corresponding diameter to Dupont's well, would, according to just and reasonable calculations, furnish about two millions gallons in twenty-four hours; also, the elevation of the water above the surface is greater than that of any other Artesian Well, and only exceeded in depth by the St. Louis well, and that to an extent of but one hundred and thirteen feet.

The water comes out with considerable force from the five-inch opening, and

NORTH VIEW OF DUPONT'S ARTESIAN WELL, LOUISVILLE, KY.





a heavy body thrown into the mouth of the well is rejected almost as readily as a piece of pine wood. By an approximate calculation, its mechanical force is equal to that of a steam engine with a cylinder of ten by eighteen inches, under fifty pounds pressure, with a speed of fifty-five revolutions per minute, a force rated at about ten horse power. The top of the well is now closed, and the water conducted about twenty feet to a basin with a large *jet d'eau* in the center, from which there is a central jet of water forty feet in height, with a large water pipe, from which the water passes in the form of a sheaf. When the whole force of water is allowed to expend itself on the central jet, it is projected to the height of from ninety to one hundred feet, settling down to a steady flow of a stream sixty feet high.

The water, as it flows from the top of the well, has a constant temperature of $76\frac{1}{2}^{\circ}$ Fahr., and is not affected either by the heat of summer or the cold of winter. The temperature at the bottom of the well is seven degrees higher than this, as ascertained by sinking a Walferdin's registering thermometer to the bottom, which indicated $82\frac{1}{2}^{\circ}$ Fahr. Taking as correct data, that the point of constant temperature below the surface of Louisville is the same as at Paris, viz: 53° Fahr., at ninety feet below the surface, we have an increase of 1° of temperature for every sixty-seven feet below that point. The increase in Paris is 1° for every sixty-one and two-tenths feet. The temperature of the water is sufficient for comfortable bathing during most of the year, a circumstance that will be of considerable importance, if it ever be turned to the use of baths. The reason of the difference of 6° between the water at the bottom of the well and at the top is, that the iron pipe leading from the surface to the rock passes through a stratum of water sixty feet thick, having a temperature of 57° .

The question naturally arises, if the vein of water supplying this well has a connection with some distant source higher than the surface of Louisville, where is that source? From all that we have been able to learn of the geology of this country, taking Louisville as a center, the first rocks encountered corresponding to the sand rock (in which the water of the Artesian Well was struck) are in Mercer, Jessamine and Garrard counties, near Dix creek, to the east of Harrodsburg. The rocks there are said to be cavernous and water bearing. The elevation is about five hundred feet greater than Louisville, and about seventy-five miles in a straight line from the city. This being the most probable source of the water, from whence comes its mineral constituents? These are obtained from the rocks through which it percolates in its way from its source to the point below Louisville where it has been tapped, and where it will doubtless flow in undiminished quantity for centuries to come, as wells having such deep sources as this are usually inexhaustible.

The water is perfectly limpid, with a temperature, as already stated, of $76\frac{1}{2}^{\circ}$, which will be invariable all the year round. Its specific gravity is 1.0113. The solid contents left on evaporating one wine gallon to dryness, are 915 $\frac{1}{2}$ grains, furnishing on analysis:

	GRAINS.
Chloride sodium,.....	621.5204
“ calcium,.....	65.7287
“ magnesium,.....	14.7757
“ potassium,.....	4.2216
“ aluminum,.....	1.2119
“ lithium,.....	0.1012
Sulphate soda,.....	72.2957
“ lime,.....	29.4342
“ magnesia,.....	77.3382
“ alumina,.....	1.8012

	GRAINS.
Sulphate potash,.....	3.2248
Bicarbonate soda,.....	2.7264
“ lime,.....	5.9915
“ magnesia,.....	2.7558
“ iron,.....	0.3518
Phosphate soda,.....	1.5415
Iodide magnesium,.....	0.3547
Bromide magnesium,.....	0.4659
Silica,.....	0.8857
Organic matter,.....	0.7082
Loss in analysis,.....	8.1231
	915.5582

GASES IN ONE GALLON.

Sulphuretted hydrogen,.....	2.0050
Carbonic acid,.....	6.1720
Nitrogen,.....	1.3580

This water is very analogous in composition to the far-famed Kissingen water of Bavaria, and of Blue Lick in Kentucky. The following tabular statement will afford a comparison of these three waters by the number of grains of solid matter in one gallon:

	<i>Du Pont's Well.</i> SMITH.	<i>Kissingen.</i> KASTNER.	<i>Blue Lick.</i> PETER.
Chloride sodium,.....	622	517	533
“ calcium,.....	66	...	...
“ magnesium,.....	15	58	83
“ potassium,.....	4	7	2
“ aluminum,.....	1	2	...
“ lithium,.....	1-10	trace	...
Sulphate soda,.....	72	16	...
“ lime,.....	29	21	33
“ magnesia,.....	77	...	...
“ alumina,.....	2	4	...
“ potash,.....	3	...	9
Bicarbonate soda,.....	3	7	...
“ lime,.....	6	29	23
“ magnesia,.....	3	21	1
“ iron,.....	$\frac{1}{2}$	6	...
“ strontia,.....	...	trace	...
Phosphate soda,.....	2	2	...
Iodide magnesium,.....	$\frac{1}{3}$	trace	...
Bromide magnesium,.....	$\frac{1}{2}$	5	$\frac{1}{3}$
Silica,.....	1	16	1

In the analysis of the Blue Lick water, Professor Peter estimates the alumina, phosphoric acid, and iron compounds under one head. We have, therefore, not been able to carry them out separately. In the analysis of the Kissingen water, by Kastner, the alumina is estimated separately, and, in his combining the acids and bases, formed by analysis, he has thought proper not to combine any of the chlorine with the calcium, nor any of the sulphuric acid with potash. Had this been done, the similarity of these waters would have been even more striking. It is well to remark, for the benefit of the general reader, that the chemist in analysing mineral water, discovers by direct process, the amount of acids and bases, and by subsequent calculation determines how they are com-

bined so as to form the various salts, as for instance: by one process, the amount of sulphuric acid is determined; by three others, the soda, lime, and potash. As to what portion of the last three are combined with the sulphuric acid, this he does not arrive at by analysis, but by calculation; and as there is no one data for making these calculations, different chemists may differ in the way they state the salts, although they may agree exactly in regard to the quantity of acids and bases in these salts. Were the analysis of these mineral waters all calculated on the same basis, their similarity would have been better contrasted, but I preferred giving the analysis of each one as it appeared before the public, made by able and well known chemists. As regards the gaseous contents, the Kissingen does not contain any sulphuretted hydrogen gas. The Du Pont and Blue Lick contain within a small fraction of the same amount.

As it has been often asked, what is the difference between this water and that of the Congress Springs at Saratoga? I would state that the last contains three hundred and eighty-five grains of common salt to the gallon, and differs from that of Du Pont's Well in the large amount of carbonic acid, and the larger proportion of carbonate of lime and carbonate of magnesia, and in the absence of the sulphates; the proportion of solid constituents is also less in Saratoga water. The Blue Lick Spring, situated in Nicholas county, Kentucky, is so well known in this country that it is unnecessary to make any statements concerning it. The Kissingen Spring not being so well known, a few remarks concerning it would be in place. These springs are situated in the Northern part of Bavaria; and it is in this neighborhood that one of the Artesian Wells, mentioned in this report, has been bored, but it has no relation with the springs that have rendered this place so celebrated for a number of years. Since 1821 these springs have attracted special notice, and there have been no less than ten or twelve lengthy reports made upon them since that time, by the best chemists and physicians of Germany. Of the several springs in Kissingen, the most famous is the Rakoczy, and every year there are upwards of five hundred thousand bottles of water sent from it to all parts of the world. It is to the water of this spring that chemical analysis shows the water of the Du Pont well to be closely allied.

Before making the medical report on this water, I would state that mineral waters are, like other medicinal agents, only to be used under the judicious advice of intelligent physicians. Mineral waters, in the treatment of disease, take a place between medical and dietetic treatment, and become eminently useful in a variety of diseases that require, for the cure or alleviation, the continued use of some mild and gentle remedy, that may be taken in connection with the ordinary drink and food. Perhaps there is nothing which puzzles the physician more than the peculiar virtues of many mineral waters. After the chemist has analyzed them, they are found to contain many well known constituents, some in very small quantities; and it seems impossible with our present knowledge, to reason fully as to what the medical nature of a mineral water will be from its chemical composition. The great value of the chemical analysis is to compare the composition of one water with another whose medical virtues are well established. It is upon this basis that the following general remarks are made, as to what we may expect from the Du Pont Artesian Well water.

The peculiar benefit arising from the use of saline waters to the mucous membrane of the stomach and digestive canal, is sufficiently well established by the daily use which both man and animal make of saline substances. If taken moderately they excite the appetite, and are looked upon as a mild and efficacious aid to digestion; in still larger doses they excite in a more marked manner the entire mucous lining of the intestinal canal, extending to the liver; and, taken into the circulation, their effects are felt in all secretive and excretive

organs, as the kidneys, etc. From what we can arrive at by the composition of this water, in connection with the known virtues of similar mineral waters, this water is certainly calculated to meet as large a variety of those diseased, who resort to mineral waters for relief, as any other known spring; for the great portion of invalids using mineral waters, suffer from some derangement of the mucous membrane of the intestinal canal, or of the serous surface of the joints, embracing the various forms of dyspepsia and rheumatism. But we will proceed to specify the applicability of this water.

The single term dyspepsia implies a variety of diseases by which the digestive organs are impaired, and, although no one treatment can apply to them all, this mineral water will meet as large a variety of them as any other. In cases of dyspepsia, whether caused by irritation or weakness, the continued and judicious use of sulphur saline water frequently effects a cure, as in that relaxed condition of the mucous membrane in the stomach and intestinal canal of elderly persons, where a very large amount of mucous is secreted without a proper portion of the other healthy secretions; also, where the stomach has been deranged by excess of either eating or drinking.

Costiveness is a very frequent accompaniment of the above disease, or it may arise from a torpid condition of the intestines alone, without any complication with the stomach; in either case good results may be expected from proper use of this water. But we must not be astonished if laxative effects are not produced by the water when the action of the skin is defective. The skin must first be brought into proper action by the bath or other proper medical treatment.

When derangements of the liver do not arise from organic disease of the liver, but it has become affected sympathetically, or by its connection with the stomach and intestines, this water may be resorted to with good effect. In other diseases in which defective digestion or assimilation seems to be the prime cause, as in gravel, gout, etc., the use of this water may give relief.

Nervous diseases arising from derangement in the blood, or from local causes, as those violent headaches from indigestion or functional derangements of the stomach. The water removing the cause removes the disagreeable nervous symptoms.

As regards the effects of the water on mucous membranes, besides that of the intestinal canal, we are not prepared to assert anything, although the distinguished German writer, on mineral waters, Dr. Vetter, states that the saline waters at Baden-Baden, when taken internally, exert a beneficial effect on chronic catarrh, leucorrhœa, etc.

This water acts on the kidneys; in part, on account of its constituents, and in part, from the water alone.

It is beyond all dispute that waters containing salt have a healthy action upon the glandular system, and when there is iodine present, however small the quantity may be, continued use of the water is sure to be felt by that system. This substance, iodine, was discovered in 1811, and very shortly afterwards its medical virtues were ascertained, and it now ranks among the most important medical remedies. Within the last few weeks additional attention has been called to the subject by Dr. Boinet, in a communication made to the Academy of Medicine, in Paris. The doctor proposes the introduction of iodine into the daily food of persons laboring under any of the forms of this disease, such as worms, cretinism, enlarged glands, etc. Wherever iodine, he states, is abundantly diffused throughout the air, these disorders are rarely seen, and that the energy of the vital functions is in the direct ratio of the quantity of iodine existing in the animal economy. He proposes to iodize bread, cakes, sirups, etc., etc., simply by the introduction of such plants as naturally contain iodine,

viz: all kinds of sea-weeds and cruciferous plants, or else by using the water of iodized springs, or salts containing the same principle. Under these forms the quantity of iodine administered is so small as to communicate no peculiar taste to the edible substance. After ten years' experience, during which Dr. Boinet has treated children specially selected by a physician of a *Bureau de Bienfaisance* for their scrofulous habit, he has come to the conclusion that the diet he proposes, if persevered in for some months, will not only cure scrofula but ulcerous habits, diseases of the skin, ophthalmia, caries of the bones, etc. The Academy of Medicine has referred Dr. Boinet's paper to a commission composed of Drs. Chatin and Trousseau. If there be any correctness in Dr. Boinet's statement, all mineral waters containing iodine will be invested with new interest. Sufficient has been said to give a correct idea of the medicinal properties of the water of Du Pont's Artesian Well, and to direct those interested in the subject as to what may be expected from its internal use.

The external use of this water will be doubtless found of great benefit, and if the proprietors should determine to apply fully its medicinal properties, they will have to construct proper baths. In most instances, and for the greater portion of the year, the water can be used at the temperature it has on flowing from the well; but for many purposes they will have to elevate the temperature 20 or 30 degrees. Thus supplied, sulphur saline waters are well known to be beneficial for a variety of diseases of the skin, scrofulous affections, and lymphatic tumors of every description, gout, rheumatism, etc. In several of the diseases it would be proper to use the baths warm, as will be advised by those physicians who may direct the patients.

In addition to the above, it may be applied beneficially in many diseases of those mucous membranes that are accessible by washing, or by injection, as in certain diseases of the mucous membranes of the eye, etc. In reporting on the medical virtues of this water, I have purposely avoided any reference to those cases which have been cured, or supposed to be cured by it; for I have not traced out any of them, as I did not conceive any record of the kind would be of much value in so short a history of the water, but I have preferred to give my opinion of its virtues from its composition, and from the known virtues of similar waters. The opinions are little else than the reflections of those of physicians in this country, Germany, France, and elsewhere, who have paid especial attention to the medical properties of mineral springs, and who are engaged in giving advice on the subject. In conclusion, I would remark that an important feature in this Artesian Well is its admirable location. Situated in one of the healthiest cities in this or any other country, and that from year's end to year's end, where the spring, early summer, and autumn, have many attractions for those seeking health or a temporary sojourn, prior to more Northern or more Southern journeyings.

In addition to this, Louisville will in one year be connected by railroad with the South and Southwest, and inhabitants of those regions, who may sojourn in this city, will be separated but a day or two from their plantations. In this report, I believe that no more than justice has been done to the hardy enterprise of the Messrs. Du Pont, the wonderful features of the well, or the medicinal virtues of the water.



FIRST PRESBYTERIAN CHURCH, GREEN STREET, BETWEEN SIXTH AND CENTER.

HEALTH OF LOUISVILLE.

The climatal position of the city of Louisville exempts her alike from the ravages of tropical diseases, and from the epidemic visitations of Typhus fever. Forster was the first naturalist who published the fact, that the interior valley of the North American Continent was singularly exempt from the extremes of temperature that belong to the Atlantic coast. Thus, yellow fever has repeatedly prevailed in New York, Philadelphia, Baltimore, Norfolk and Portsmouth, whenever abnormal temperature was coincident with proportional humidity and decaying vegetable matter. But that tropical disease has never been above the 35° of latitude in the interior valley, and only once at that point. Louisville is in the 38° of latitude, and is far above the highest northern limit of yellow fever in the interior valley, and far below the southern line of the Typhus fever zone. This geographical position furnishes ample security against the invasion of these forms of disease.

In the early history of Louisville, a large portion of the city, that is now covered with buildings for business and habitation, was the seat of ponds and marshes, and in 1822, in the midst of intense solar heat, and frequent showers, the undrained and unpaved parts of the city were the seats of a most destructive pestilence. She then acquired the reputation of being "the grave yard of the West." But this disaster pointed out the necessity and the means of sanitary measures, and they have been pursued with as eminent success as has ever been attained any where by sanitary art. An extensive sanitary system was devised, under which ponds were filled or drained, and streets were graded, paved and sewered. In a direct ratio with the progress of these measures has been the redemption of the city from visitations of those forms of pestilence that spring from local conditions. In these great and enduring results, the people of Louisville have established the fact that "the evil which springs from the bosom of nature, only needs for its removal an observance of the rules which nature herself reveals." In the progress of time, recurring seasons developed the spots in the city in which sanitary measures had not been perfected, and the useful lessons thus given have been heeded. In 1832, 1833 and 1849, cholera commenced in precisely the same square, each successive time, within a few yards of its preceding visitation. These occurrences pointed infallibly to a local cause, dependent upon a local condition. In 1849 this thrice visited spot was thoroughly improved, and from that time to the present, nothing of its former affliction has occurred in that locality. Every spot in Louisville that was at any time the seat of this pestilence, and that has undergone sanitary measures that completely changed the character of the topography, has been perfectly exempt from that disease ever since the change was perfected.

In precisely an analogous way, intermittent and remittent fevers have been banished. When Jefferson street was a string of marshes, it was the seat of autumnal fevers. After it was graded and paved, it ceased to produce those disorders. The same is true of Green, Walnut, Chestnut and Broadway, and of the eastern and western ends of those streets. Grading, paving, drainage and habitual improvements have converted them from seats of annual disease into sites of enduring healthfulness.

There are, however, additional reasons why Louisville possesses these enduring means of health. She is one of the most perfectly ventilated cities in the world. She occupies the edge of an extensive level that spreads for miles south, east and west of her location, and the Ohio river is the northern boundary of this plateau. Her streets are wide and cross each other at right angles, and she is thus secure of thorough ventilation, the winds from every point of the compass having an unobstructed passage through the streets.

Tubercular disease is not only a more rare affection in Louisville than it is in the eastern, northern, north-western and southern sections of our Continent, but it is generally more manageable. Those climatal conditions that produce the aberration of nutrition that tends to the deposition of tuberculous matter, are much less active, as all medical observation shows, in this region, than in Boston, New York, Philadelphia, Baltimore or New Orleans.

The diseases of infancy and childhood are greatly less frequent and disastrous in Louisville than elsewhere, and this fact is unquestionably due to the general healthiness of the city. Children have been described as constituting the outposts of society, which first feel the invasions of disease. As the invasions are lessened or prevented, the perils of the outposts are lessened and prevented.

The knowledge of these facts is the result of a long acquaintance with the subject, and of patient observation. The climatal conditions that produce disastrous diseases elsewhere are absent from this region. The topographical conditions which, when present, invariably cause the ravages of well known forms of disease once existed here and produced their regular and necessary ravages. These conditions have been changed, and the results have been changed in a degree corresponding with the changed conditions. The philosophic observations of three hundred years show that these triumphs of enduring health over diseases from local causes can be surely won, and point out the infallible means by which these victories of mind can be secured. The history of Louisville adds to the thousands of similar histories, abundant confirmation of the truth of these philosophic observations. The Duke of Tuscany has reclaimed from annual pestilence of the most fatal character, a large portion of the Mediterranean part of his duchy, and has made it permanently healthy by precisely such sanitary means as have been successful in Louisville. The climatal and topographic conditions of Louisville are such as enable medical philosophy to speak in positive terms of her pre-eminent claim to be regarded as one of the most healthful cities of the great interior valley of the North American Continent. As an ample corroboration of the truth of these statements respecting the possession of these sanitary conditions, we republish, from Casseday's History of Louisville, published in 1852, the following indications of vital statistics:

In Louisville	the.	deaths	are	1	to	50
Philadelphia.....	do.....	1	.....	36		
New York.....	do.....	1	.....	37		
Boston.....	do.....	1	.....	33		
Cincinnati.....	do.....	1	.....	35		
Naples.....	do.....	1	.....	28		
Paris.....	do.....	1	.....	33		
London.....	do.....	1	.....	39		
Glasgow.....	do.....	1	.....	44		

Since this table was published in 1852, Louisville has improved in her vital statistics, and some of these cities have lowered their scale. For instance, instead of one death in 37 in the city of New York, recent facts show that there is one death for 28 inhabitants.

This sanitary survey of Louisville, while pleasant and cheering in its general character, is greatly enhanced in value by the fact that a great deal of the triumph thus secured over the causes of disease, and by consequence over its ravages, is due to the proper use of sagacity, enterprize and well regulated and well directed sanitary wisdom. That which has been won by such means, can be maintained by their continual exercise, as all experience shows.



CATHEDRAL, FIFTH STREET, BETWEEN GREEN AND WALNUT.

LOUISVILLE GAS COMPANY.

The Louisville Gas Company was incorporated the 15th Feb., 1838, with a capital of \$600,000, for the term of thirty years from the 1st of January, 1839. The Company organized in the year 1838 by the subscription and payment of \$232,300 by individuals, and the subscription of \$200,000 by the city of Louisville—\$100,000 of this sum the city paid by executing her bonds, bearing six per cent. interest, payable in thirty years; the other moiety of the sum subscribed, to be paid for by the profit on the \$100,000 of stock, paid for by bonds, after deducting the semi-annual interest on the bonds; the remainder placed to her credit as new stock semi-annually until the sum subscribed was paid in full. On the 3d January, 1859, the dividend completed the payment on the stock.

The first division of the Gas Works was built in 1839, under the direction of S. V. Merriek, Engineer, of Philadelphia. (The Louisville Gas Works were the first constructed in the Western States, and the fifth in the United States.) Gas was first supplied to the citizens on the 25th December, 1839. The Gas Works then consisted of one Retort-house, with one bench of six ovens set with 18 large D retorts, one Purifying-house, with one set of dry lime purifiers, one set of condensers, one plunge washer, two gas holders, each 40 feet diameter and 18 feet high, with capacity to store 45,000 cubic feet of gas, a Meter-house and one station meter, 72 street lamps, and $6\frac{1}{4}$ miles of street main.

The second division of the Gas Works was built in 1848, under the supervision of John Jeffrey, Engineer. The addition consisted of one bench of six ovens, set with 18 retorts, one washer, one set of condensers, one set of purifiers, one station meter, and a governor, all placed in the original buildings; a gas holder 60 feet diameter, 22 feet high, capacity 62,000 cubic feet; an engine house, engine and pump to supply the Works with water. At the close of the year 1848, there were 16 miles of street main and 461 street lamps.

Under the direction of John C. Cresson, Engineer, of Philadelphia, in 1855, the fourth gas holder was constructed; it is $87\frac{1}{2}$ feet diameter and $31\frac{1}{2}$ feet high; capacity 187,000 cubic feet.

In the year 1857, under the same direction, the Gas Works were enlarged by the addition of a Retort-house 109 by 53 feet, with foundations for two benches, one of twelve ovens, the other of ten. One bench of ten ovens was built and set with thirty large D retorts, a Purifying-house 67 by 30 feet, with one set of condensers, one set of refrigerators, one set of jet-washers, and one set of purifiers, with apparatus complete to purify the gas from 30 retorts. A station meter, with capacity to measure 400,000 cubic feet per day, made by Code, Hopper & Co., of Philadelphia; a lime-house, with cellar to contain heating apparatus, a dwelling for the superintendent, a blacksmith shop, and a coal-house 121 by 80 feet, with a bridge 130 feet long connecting the house with Washington street, on which street the Gas Works front $237\frac{1}{2}$ feet, extending 510 feet deep.

The Gas Works now have 66 retorts, with capacity to produce 280,000 cubic feet per day, with sufficient room in the buildings to add 36 retorts and the purifying apparatus. With this addition, the Works can produce 433,000 cubic feet per day.

The Gas Company have now laid 35 miles 2157 feet of street mains, 2, 3, 4, 6, 10, and 12 inch; 925 street lamps, 2879 private service pipes.

The annual increased production of gas by these Works will give some idea of the steady progression of the city. The following statement shows the product of gas each year to the present time:

1840.....	6,545,810	cubic feet
1841.....	8,850,320	" "
1842.....	9,911,380	" "
1843.....	10,221,460	" "
1844.....	10,612,190	" "
1845.....	11,000,750	" "
1846.....	11,630,510	" "
1847.....	13,857,350	" "
1848.....	15,729,140	" "
1849.....	18,493,670	" "
1850.....	21,178,410	" "
1851.....	22,906,300	" "
1852.....	23,881,100	" "
1853.....	28,755,900	" "
1854.....	35,526,600	" "
1855.....	35,609,500	" "
1856.....	38,536,700	" "
1857.....	42,461,500	" "
1858.....	47,512,100	" "

During the past year an average of 42 men were employed daily by the Company, and 18 $\frac{2}{3}$ lamp lighters.

In the year 1857 the city derived profit from the Louisville Gas

Company.....\$21,189 45

Also in the year 1858.....23,066 87

City's profit for two years.....\$44,256 32

The interest on her \$100,000 of Bonds paid by the

Gas Co. for two years.....\$12,000 00

The cost of City Lamps in 1857.....16,023 18

" " " " 1858.....17,399 31

\$45,422 49

The two past years the profit of the city from the Louisville Gas Co. has paid the interest on \$100,000 of Bonds, and the street lamps within \$1,166 17.

Capital Stock, Jan. 3d, 1859.

Louisville City Stock, paid for by Bonds.....\$100,000

" " " " " Dividends on Stock

after deducting the annual interest on Bonds.....100,000=\$200,000

Stock held by individuals.....281,400

\$481,400

Capital Invested.

Real Estate, site for Gas Works,.....\$18,801 09

" " Office.....6,738 26

Gas Works, Building and Machinery.....180,837 58

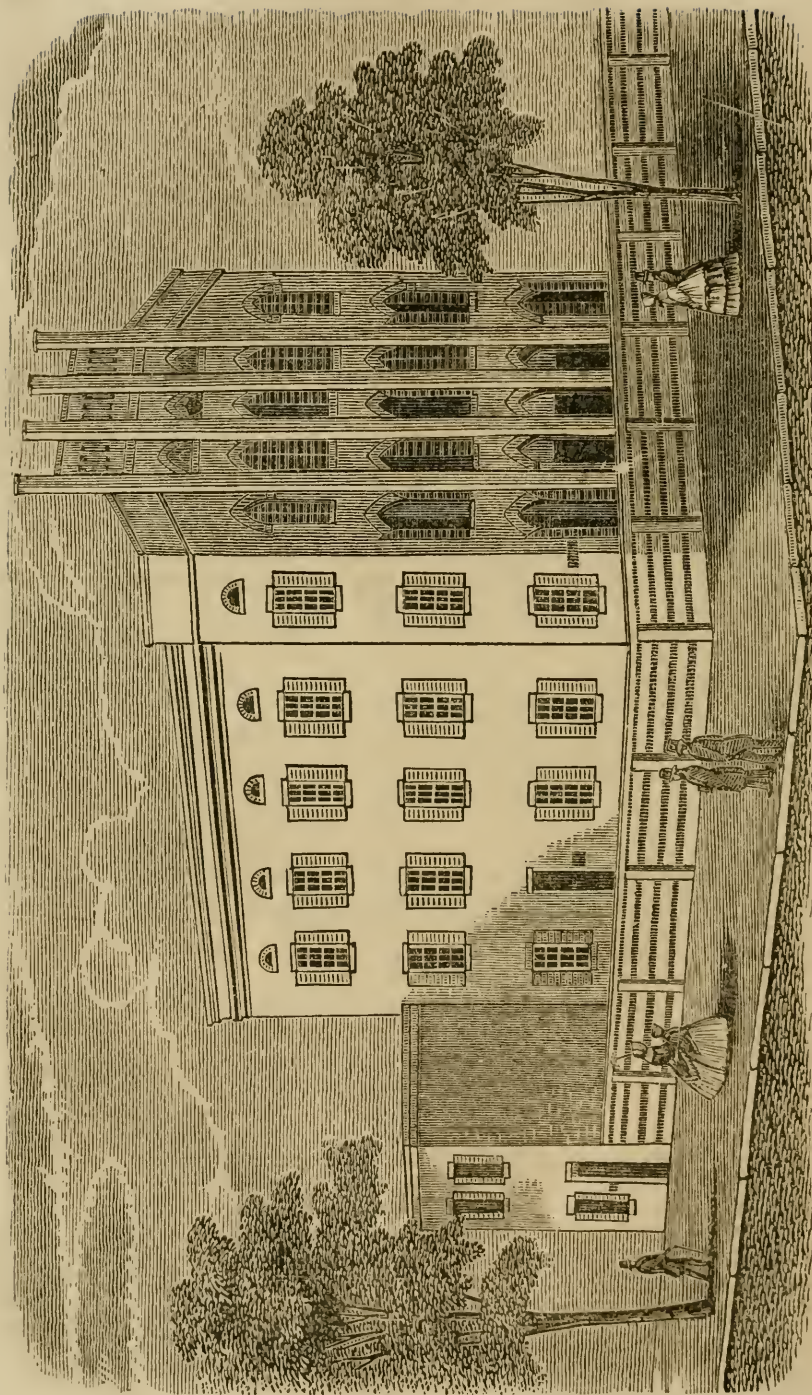
Street Mains.....155,632 71

" Lamps.....26,663 06

Service Pipes.....23,471 08

Meters.....28,206 00

\$440,349 78



KENTUCKY SCHOOL OF MEDICINE, CORNER OF GREEN AND FIFTH STREETS.

LOUISVILLE WATER WORKS.

The advantages to be derived from a ready supply of pure water, and unlimited in its quantity, can scarcely be over estimated by any community. The social and manufacturing interests of Louisville have long desired it, and the rapid growth of the city now demands it as a necessity. This want had been felt for a long time, but no steps had been taken towards so useful an object, until the latter part of 1853, when application was made to the Legislature for the purpose of obtaining a charter and incorporating a company. This company, under the title of "The Louisville Water Company," was incorporated by an Act of Assembly, approved March 6, 1854, "with power and authority to construct and establish water works within the city of Louisville or elsewhere, for the purpose of supplying said city and its inhabitants with water." By the terms of their charter, the capital stock was limited to 10,000 shares of \$100 each, and they were authorized to issue their bonds for that amount and to secure them, if necessary, by a mortgage of their lands and water rents.

The same instrument provides that water shall be furnished to the citizens of Louisville at a rate not exceeding the average price of the cities of Pittsburg, Cincinnati and St. Louis.

The history of like corporations in other cities manifests the sound policy of placing them under municipal control and making them the common property of the citizens. This was evidently the wish of the Legislature, and has been warmly recommended in the first report of the President and Directors of the Company.

The Charter provides that "The city of Louisville may, at any time, purchase the said corporation, its franchise and all its personal and real property by paying therefor such a sum, as together with its receipts will reimburse the whole amount expended, with an annual interest of ten per cent., and from and after the execution of the conveyance the said city of Louisville shall have the right and be subject to all the duties in this act expressed as to corporation."

Though the charter was obtained March 6, 1854, little was done for some time toward organizing the company with a view to efficiency, but application having been made to the General Council of the city, that body passed an ordinance approved June 30, 1856, entitled "An ordinance to promote the creation of Water Works in the city of Louisville."

By this ordinance the Mayor of the city was directed to subscribe for 5,500 shares of stock in the Company, and to pay for them in bonds of the city, at \$1000 each, payable 30 years after May 1, 1857, with interest at 6 per cent., payable semi-annually.

The same ordinance, among other provisions to secure the payment of the bonds, authorized a tax of ten cents on each \$100 of real and personal property, which might be lessened according to circumstances mentioned in the ordinance.

The city charter requires that an ordinance of the above character shall be submitted to a vote of the qualified voters of the city in order to receive their sanction before passing into operation. At an election held on the 6th September, 1856, the question was accordingly submitted with the following result: For the subscription 1,415; against 370, leaving a majority of 1,045 in favor of the ordinance.

In July 1857, the city paid her subscription to the Company in bonds as directed by the above ordinance. The subscription for the stock of the Company by private individuals has, up to the present time, amounted to only \$5,100. Thus far the Company has been so conducted as to render practicable the general desire, that the works when completed shall become the property of the city. About \$220,000 are required to complete the works. The City Councils have

passed an ordinance in most respects similar to that above mentioned for the purpose of completing the works. This was submitted to a vote of the people and carried by a large majority in April of the present year.

The grounds of the company are located on the Ohio river, about one mile and a half beyond the city limits, and contain 120 acres of land most beautifully diversified by hights, from which may be had an extensive view of the city and surrounding neighborhood for many miles. This large tract is covered with majestic trees, and with taste and but little expense, may be converted into a most delightful resort. The natural beauties of the place are unsurpassed by any possessed by similar works in the country, and excite unqualified admiration.

The location has been carefully selected with a view to obtain for the city a copious supply of pure water. No better selection could have been made. It is far removed from those offensive drainages which are, in a great measure inseparable from a close proximity to a large city, and the organic impurities which render a pure supply of water in many places difficult, if not impossible, are here unknown. The shore of the river above the inlet-pipe, for a distance of about four miles, has a clear gravel beach, and is washed at all stages of the river by a lively current. The point from which the water is taken is about three and one third miles above the foot of Third street.

It will be interesting to most of our readers to have a sketch of the manner in which the water works now in course of erection are planned, and the method by which the city will be supplied.

A large inlet-pipe extends from the pump wells in the engine-house into the river to a depth of seventeen feet of water when it is in its lowest stage. The distance from the engine-house to this point is 300 feet. This pipe is fifty inches in its inside diameter, and terminates in and is secured to a crib, built of oak timber, sunk and retained in its position by broken stone with which it is filled. To the mouth of the inlet-pipe an iron grating is attached, which may be removed at any time to be cleaned. The water passes from the river into the inlet-pipe through this grating, which acts as a strainer. In order to remove any deposit found in this pipe, there is a communication between it and the stand pipe by a pipe and valve separate from the main pump, by which the entire head of water in the stand pipe or reservoir can be at pleasure applied to the inlet-pipe, and thus scour and clean it.

The water for the supply of the city will be elevated by two purely Cornish engines, exact duplicates, each of which is by itself capable of furnishing the necessary supply. Thus in case of accident, or when, for any reason, it is deemed proper to stop one engine, the supply will not be suspended. They will be worked week about, and are of the following dimensions: The steam cylinders are 70 inches in diameter; stroke of piston 10 feet. They will have a double and equal walking beam, 15 feet 11 inches from the main center to the end center, making the total length of beam 31 feet 10 inches. Each engine is of 200 horse power, and is capable of elevating over 3,500,000 gallons of water in eleven hours, which is the quantity at present sufficient. The pumps are so arranged that these engines can supply any quantity the necessities of the city may hereafter require. Connected with each engine there will be three boilers, six feet in diameter and 30 feet long.

The plunger of the main pump will be three feet in diameter, with a stroke of ten feet, and will elevate at each stroke 529 gallons of water in the reservoir.

The stand pipe will be made of boiler plate, four feet in diameter. The top of it will be 176½ feet above the extreme point of low water. It is to be erected in front of the engine house, at a distance of 60 feet from the main building. This pipe will be enclosed by a tower, the architecture of which will be in harmony with that of the engine house. The entire height of the stand pipe tower

will be 202 feet above the extreme point of low water. The tower is surmounted by an observatory, to which access is had by means of a spiral stairway on the inside. The elevation of this stairway is about 180 feet above the same low water mark, and from it the visitor may command a view of the city of Louisville, New Albany, Jeffersonville, the Falls of the Ohio, Utica, Twelve Mile Island, and the surrounding country.

Connected with this stand pipe is the pump main, 30 inches in diameter and 3,700 feet long. It receives the water from the pumps at the stand pipe and conveys it to the reservoir.

The reservoir will be built of earth puddled as its construction progresses. At the base of the retaining embankments outside, it will be 500 feet long and 304 feet wide. The retaining embankments built of earth and puddled, are to be 24 feet high, 92 feet wide at the base, and 20 feet at the top. The slopes inside and outside $1\frac{1}{2}$ feet horizontal, to 1 foot perpendicular. This reservoir will be divided into two equal parts by a division embankment 50 feet at the base, 14 feet at the top, and 12 feet high. The two basins of the reservoir thus formed will be each 24 feet deep. Among other advantages obtained by this division, a commotion of the water is prevented and the purification of the water by subsidence is consequently facilitated. The elevation at the bottom will be $122\frac{1}{2}$ feet above the extreme point of low water in the Ohio, and the top of the retaining embankments $146\frac{1}{2}$ feet above the same point. The bottom of the two basins and inside slopes of the retaining and division embankments of the reservoir will be lined with brick, laid in cement mortar. By having the reservoir deep and lined in this manner, vegetation upon the internal slopes is prevented and the water is freed from a most fruitful source of organic impurity.

The engine house will be built of brick on a stone foundation 46 feet deep, and is now in course of construction. The top line of the water table of this foundation will be two feet above the extreme point of high water, or two feet above the highest known in the Ohio river, bringing the main or engine room floor two feet above the same water mark. This structure will comprise a main building and two wings. The main building or engine house proper will be 47 feet front by $56\frac{1}{2}$ feet deep, and two stories high. The first story is 26 feet and the second 24 feet, making 50 feet to the top of the cornice. The boiler houses or wings are on each side of the main building, and will be $55\frac{1}{2}$ feet front, and 32 feet deep of one story $28\frac{1}{2}$ feet high, making an entire front of 158 feet.

This house will be built in the Corinthian style. A beautiful colonade extends in front of the main building and along its entire southern front, having four Corinthian columns 42 feet high, surmounted by an entablature eight feet high and a pediment of eleven feet. These columns stand outside from the main building 15 feet to the outside of their bases. The roofs of the building with the window caps of the lower windows will be pediments. The sheeting of the entire roof will receive a metallic covering and be supported by wrought iron trussed frames. These will be durable and render the building fire proof. On each end of the wings, 12 feet distant, there will be a chimney stack, with an octagonal base, the main shaft is round and the whole will rise to the height of 120 feet.

The whole has been planned and is under the superintendence of T. R. Seowden, Esq., a most skillful and experienced engineer in this department. The pipes are already cast, and will extend nearly thirty miles. The laying of the pipe is progressing rapidly. Over one third of the reservoir is completed, and the engines will be ready to be placed in the engine house in the fall of the present year. The water will be supplied to the city without doubt in the early part of 1860.

WATER POWER AT LOUISVILLE.

The Ohio river has been celebrated, ever since its discovery, for its gentle and uninterrupted flow for a distance of nearly one thousand miles through one of the finest valleys in the world. There is no interruption of its gentle current or break of its smooth surface, in all its long course, save one, and that one is here at Louisville. A ledge of solid, compact limestone stretches diagonally across the stream, over which it swells in its resistless course, and then makes its way for a distance of two miles, descending, as determined by different engineers, from 24 to 26 feet. These falls have ever been regarded by scientific and practical men as offering great advantages for manufacturing.

About the beginning of the present century, the Water Power of the Falls was the subject of much attention and investigation. We find that it was always spoken of in connection with the proposed canal to improve the navigation, and regarded as equal in importance to that interest. Thus, the first survey that was ever made of the Falls by a competent engineer, exhibits fully as much attention to the water power as to the navigation. This survey was made by Mr. Jared Brooks, and the very accurate map made of the Falls, Canal, "Water Works," &c., by him, now lies before me. It is entitled "A Map of the Rapids of the Ohio River, and of the countries on each side thereof, so far as to include the routes contemplated for Canal navigation. Respectfully inscribed to His Excellency Christopher Greenup, Governor of Kentucky, by his very obedient servant, J. Brooks. Engraved and printed by John Goodman, Frankfort, Kentucky, 1806." This map, for which I am indebted to my friend, Mr. William Forwood, of this city, gives the plan of the canal nearly as it has since been constructed, and also of extensive "water works."

Had these works been constructed as contemplated by the Engineer, the canal would to-day be worth as much to community for manufacturing as it is for navigation, and would cost far less to keep it clear of mud than it now does.

A section of this map gives an enlarged "Plan of the work below L (upper lock), including all the locks and aqueducts for the supply of 'water works,' and situations marked from 1 to 12 (mill sites), which may be extended to any required distance." In the "Notes," the author says: "The rapids are caused by a vast body of rock which crosses the course of the Ohio at this place, and obstructs the current until it swells over its top, and thence searches a passage down an irregular declivity to the lower end of Rock Island. The draught of the Falls reaches to the line before mentioned, crossing obliquely above the rapids, from whence the velocity of the current increases to the great break of the current at C; from thence to D, the current rates ten miles and 1066 yards an hour; from D to E, thirteen and a half miles an hour; thence to the lower end of Rock Island, nine miles and 990 yards an hour; in all, according to the course of the channel, 3366 yards in ten minutes and thirty-five seconds. * * * It is calculated that the canal will be sufficiently capacious for a ship of four hundred tons. (No steamboat had as yet been seen on the Ohio). The water will be carried plane with the surface above the rapids, to the bank of the river below the whole falls, and then disposed of agreeable to the enlarged plan of the work below the letter L (upper lock); so that any required number of water works may be erected, and each benefitted by a perpendicular fall of water equal to the whole fall of the rapids, viz. 24 feet. The water works will stand upon a high and permanent bank, close under which is the main and only channel of that part of the Ohio, which seems to have been carved out of the rock for that purpose. Boats and vessels of any burthen that can descend the river, may lie alongside of the mills and store-houses, and lade and unlade with the greatest convenience imaginable. The land in the vicinity of the

rapids, on both sides of the river, is generally of the first quality, and is so shaped as to afford beauty with convenience. That part situated within view of the rapids, is beyond description delightful."

This Map of the Falls, by far the most accurate and complete we have ever seen, exhibiting every prominent rock, current, and eddy, and the forests on either side of the river as they stood at that early day, shows how feasible the development of the Water Power of the Falls was then considered.

In the absence of the map in this work, we will explain to the reader that Mr. Brooks' plan for "water works" consisted of a couple of races taken out, one on either side of the main canal, just above the upper lock, and running parallel with the river bank, upward and downward, from which races short sidecuts were to be made at convenient distances for mills, and the water discharged into the river after it left the wheels. The race was to be extended down the river to any distance that might be required, thus furnishing room and power for an indefinite number of mills.

That this was, and is, all perfectly practicable, no one at all familiar with the subject can doubt; and had it been carried into execution, simultaneously with the canal, Louisville would have been at this day one of the greatest manufacturing cities in this country. A portion of the people of Louisville then opposed the construction of the canal, because it would destroy the business of transporting passengers and freight around the Falls, and a large commission and forwarding business, by which a vast number gained a livelihood. To meet their objections, the friends of the enterprise urged the fact that the canal, when completed, would make Louisville one of the greatest manufacturing cities in America; thus, besides giving better employment to the persons concerned, it would be the means of drawing infinitely more people and more business to the place than could ever be realized without the canal. It was urged that a city, possessing all other advantages in the highest degree known to any in our country, and adding this unequalled water power above every other, could not fail to advance to the rank of the most populous and important of Western cities. Nor does it appear that any one looked upon the canal in those days as simply and solely to facilitate navigation. Water Power was in the mouths of all its advocates, whether in the halls of legislation, on the stump, or in the street. It was to serve the double purpose of navigation and manufacturing. How strange, then, that we should be told, at this day, that the canal can not spare the necessary water for manufacturing! With the whole Ohio river to feed it, men are afraid a number of mill-wheels will drain it dry! "The canal can not spare the water without reducing the depth so as to interrupt navigation." Yet not a canal can be found in America, if it has any fall, that is not used for manufacturing—no, not even the least of them, even where the "feeders" are miles distant from the point where the power is required; while on our canal we have an immense volume of water constantly pushing with great power, thus preventing any material decrease in the depth. This objection is simply childish and ridiculous.

Had our fathers been told that but half the original plan would be carried to completion by the year 1859, and that their sons would at this day not only be neglecting this boundless source of wealth and prosperity, but actually arguing themselves into the belief that the thing is impracticable. they would have denounced us as unworthy of our origin.

The thing is and always has been practicable, and of such easy development, that we are amazed when we consider it. That a basin commanding the whole power of the Ohio river should stand there within a few yards of the river bank for a period of 29 years, at an elevation of 24 feet above the current passing beneath it, and not be let into a mill wheel, is strange indeed.

To show more clearly still the feasibility of the water power here, we will state that the plan as drawn by Mr. Brooks, and as the canal is now constructed, brings the water on the plane or level of the river above the falls to the upper lock, which is only a few rods from the river bank below the falls. The river bank at this point is composed of a very adhesive clay, or chiefly of this material, down to the black devonian slate, which at this point forms the floor of the canal, and in which the locks are constructed. The land slopes down gradually from the upper lock toward the river, the main and only channel of which at low water is immediately under this bank. The water in the canal basin above the upper lock stands at an elevation of *twenty-four feet above the level of the water in the channel of the river* just alluded to. By taking out the two races as drawn by Mr. Brooks, one extending up the river for a distance of half a mile or more, and the other down the river to any distance that may be desirable, water can be drawn from them on to mill wheels, by means of side cuts for a vast number of mills. To do this in the cheapest way let the races be extended only as demanded for new mills. A few yards of race and one mill will develop the principle, and this can be done at less cost than would be required to start an ordinary country mill, where a dam had to be constructed. This arrangement, it will be seen, will place the manufacturing establishments two miles distant from the business part of the city. To obviate this difficulty, and also to place the mills entirely beyond the reach of high water, we will suggest another plan, which we long since determined in our own mind was feasible, and in some respects preferable to the one just given.

Just south of the canal, from fifty to one hundred yards, or perhaps more, there is a beautiful elevation forming the terminus toward the river of the vast plain or table land on which the city stands. This elevation or bluff, as it is usually called, forms a most beautiful feature of this unrivalled landscape, and runs parallel with the canal from its head to near its foot, the bluff bending to the south with the river when opposite the locks, and the canal bending a little to the north at that point to enter the river. Immediately on the brow of this bluff runs a fine wide street, two miles in length and well bouldered, called High street. The travel on it is immense, it being one of the great thoroughfares between this city and New Albany, on the opposite side of the river, below the falls. Between the bluff and the canal there is a beautiful valley, which is generally a little lower between the bluff and the canal than where the canal runs through it. Standing on this bluff near the upper end of the canal, and looking down the valley westward, one will almost declare that nature made the valley for a race to run just at the foot of the bluff parallel with the canal from end to end to receive the water drawn by hundreds of cross-cuts from the canal after it shall have turned as many wheels, and convey it off into the river at the west end of the valley. This beautiful bluff evidently seems to have been formed for hundreds of manufacturing establishments to stand upon, fronting on one of the prettiest streets in the world, while the elevated plane south gives room for tens of thousands of artisans and laborers to build their homes.

Such a race it is believed can be made at a small cost as compared with the present canal. First, because it need not be more than half or one third as large; and next, because it seems very probable it will miss the rock through which the canal is excavated. Several wells have been sunk on the south side of the canal, which reveals the fact that the rock dips south very suddenly. Du Pont's great Artesian Well is but a few rods south of it, and there it is 76 feet to the rock, which must be many feet below the bottom of the canal. If the race were commenced at the lower end, and a mill constructed there, so as to develop the practicability of the plan, the expense as in the other plan would

be but small. Then it could be extended as required until the upper end of the line of mills would be quite in the business part of the city as the business is now located. The whole of the mills would then be on a high and beautiful plane, entirely out of the way of floods, ice, and drift.

When we consider the cheapness of water machinery as compared with steam, and the trifling cost of running it especially, it surely can not fail to strike every one as far preferable. We believe, as a general rule, water machinery does not cost more than one third as much as steam machinery in the first instance, and as to the cost of running it, there is so great a difference in favor of water machinery that it is as one to one hundred, or even less than that. The reason why steam is so generally adopted is because water power is so rarely found in favorable situations for manufacturing extensively. The power is far from the great markets, or from the raw material; is difficult of access, or precarious and uncertain. Here it is otherwise in all these respects:

1st. We have power equal to all the steam engines in Pittsburg, Cincinnati, and Louisville combined.

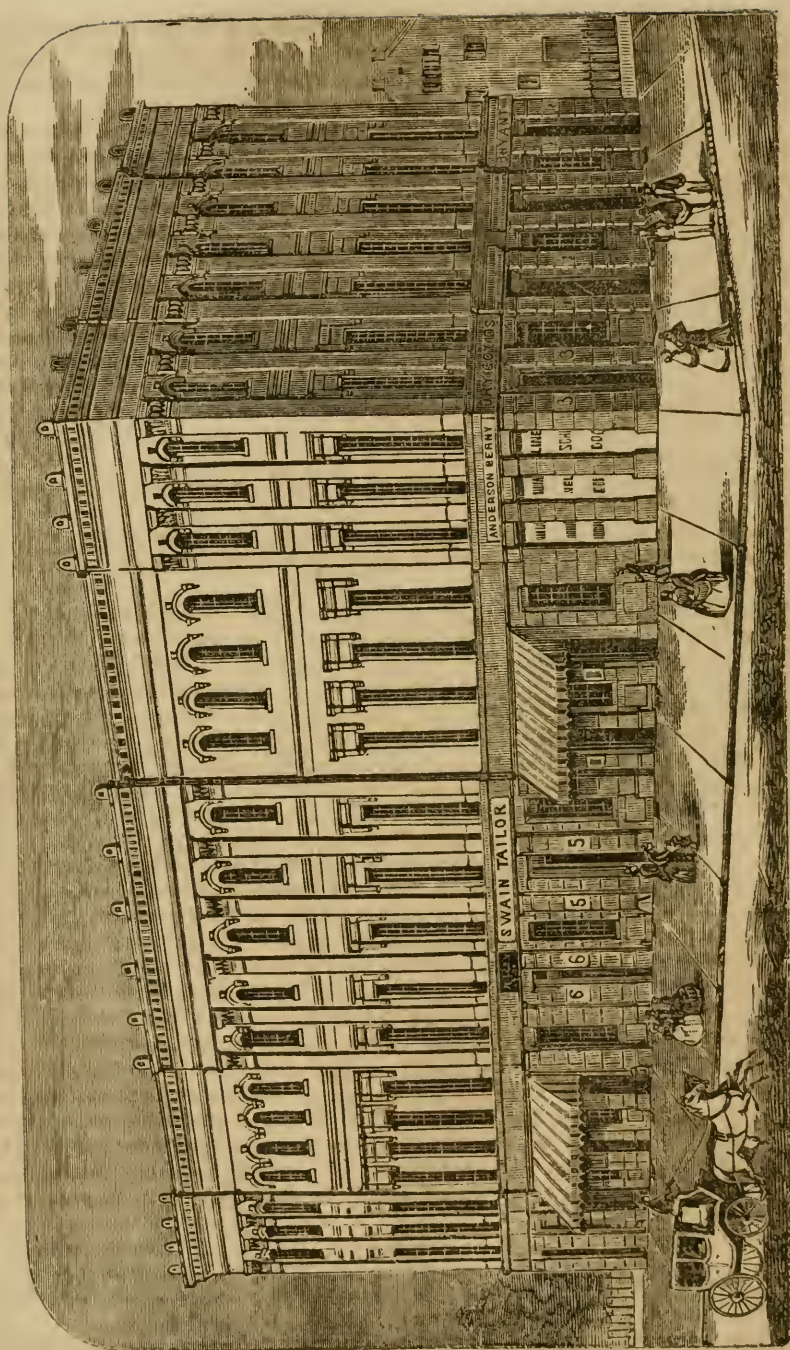
2d. It is in one of the large cities of the country, and on one of the great rivers of the nation.

3d. It is in the midst of raw material of all kinds, which can be had here as cheap as any where in America.

Again: most water mills are situated on streams where they are exposed to the destructive force of floods, which carry away their dams, and damage the machinery or buildings.

Here, nature built the dam, and it has stood since the world began. The mills will not be exposed to the floods, but will be inland, completely land locked; and the power, while it is capable of driving a thousand mills, can not injure one of them. We do not believe that there is another place in America, if in the world, where there is such a combination of advantages for manufacturing as here in the Falls City. We have stood and surveyed the mighty, the thundering, the terrific Niagara, and felt our whole being tremble with awe as we contemplated the power of the vast river in its headlong plunge to the gulf below. But there are many difficulties to be overcome there before Niagara can be harnessed to the wheels of the manufacturer, that do not exist here. Millions of money must be raised to cut channels through that hard rock for many miles. The raw material is not so accessible, the land is poor, and the great city is not there. And besides every other advantage which we have named, all the raw material, and the manufactured articles, can here be shipped to and from the very doors of the mills by water. Not a cent of expense for drayage need be incurred. The canal running along the whole line of mills, will bring steam and all other vessels of the heaviest burden to the very doors of the mills.

All the investigations and surveys, whether made by the authority of Congress or by that of the Legislature of Kentucky, fully demonstrate the fact that whether the object be to facilitate navigation or the development of the water power for manufacturing, the Kentucky side of the river is the place to construct the works. This is the unvarying testimony of every competent surveyor and engineer. The cost on this side will not be anything like so great as on the Indiana side. So they all testify in their published maps and reports.



MASONIC TEMPLE, CORNER FOURTH AND JEFFERSON STREETS.

MANUFACTORIES.

LUMBER MILLS.

There are seven saw mills in the city, several of them running gang saws, besides the single saw, which is common to them all. One of them, also, runs a lath machine, which cuts laths faster than any machine we had seen before. These mills are all first class saw mills, and are kept going all the time. The demand for lumber being equal to their utmost capacity. Very little, if any of it, is sold out of the city. They employ an aggregate capital of \$160,000; about 60 hands; and their sales amount to \$175,000 a year.

There is one saw mill which saws nothing but cedar lumber posts, scantling, and boards. This is a "portable saw mill," yet does a considerable business. The logs for this mill come from the Kentucky river. Notwithstanding the large amount of cedar lumber furnished by this establishment, we notice all the lumber yards keep a supply of the same articles.

In this department we may also notice our

PLANING MILLS.

There are five of these, some of them equal in every respect to any we have ever seen, exhibiting in every department skill, order, neatness, economy, and efficiency. The latest and most approved machines may here be seen working up to their full capacity from dawn to dark every day in the year on which it is lawful to work. They turn out doors, blinds, sash, frames, flooring, and mouldings equal to any in the United States, and also packing boxes for all kinds of goods. These five mills employ about one hundred hands, and do business to the amount of \$200,000 a year. Orders for every kind of building work are neatly and substantially executed. Also all kinds of plain and fancy steamboat joiner-work. Some jobs of this kind turned out by one of these mills are equal to any ever seen on the western rivers. Louisville built steamers, it is generally admitted, exhibit more taste and elegance than those of any other place. They are an honor to our city where they are seen. One or two of our planing mills will be much enlarged this season, and a new one is now in course of construction.

TANNERIES, CURRYING SHOPS, AND MOROCCO MANUFACTORIES.

There are sixteen tan yards, all of which, we believe, have currying shops attached to them, and several of them manufacture large quantities of morocco. They employ a capital of \$100,000, more than 100 hands, and do business to the amount of \$456,800 a year. This interest is one of great and growing importance in Louisville. The facilities for procuring bark being greater here than at any other point give her important advantages. Besides the tanneries in the city, there are many in the surrounding country, and their leather is disposed of in this market. There ought to be a large manufactory of shoes and boots, or, rather, several of them here. We believe no point affords a better opening for enterprise and industry in this business than Louisville. The sales of these articles in this market are immense and annually increasing. When our railroad opens all south of us to this market, we may reasonably expect an unprecedented increase in the sales of boots and shoes. Let the men of industry and enterprise who can command a capital equal to the task of opening a new branch of business, come hither, then, and prepare to meet a large demand and reap a golden harvest. The demand is sure to come if invited by adequate supplies and fair terms.

BLACKSMITHING AND WAGON-MAKING.

There are twenty-seven blacksmith and wagon-making shops. In these shops the wood work is carried on in one part of the establishment and the iron in

another. Some of them are very large, and their machinery and facilities for manufacturing are of the latest and most approved descriptions. They employ a capital of \$70,000, 170 hands, and do business to the amount of \$200,000 a year. Two of these establishments have been long in the business here, and their work is known all through the South-west. The work of these shops speaks their merit wherever it is known, better than we can do it. They use good materials, and put them together in the most substantial manner. These shops do not include the ordinary blacksmith shops, which are very numerous.

STEAMBOAT SMITHS.

We use this term to designate blacksmith work for steamboats, etc., without including the heavy forging of shafts, etc. There are two shops of this description, employing a capital of \$20,000, 20 hands, and doing business to the amount of \$35,000 a year. All kinds of steamboat work is done by them except the forging of heavy shafts as before stated.

We will mention in this place that a vast amount of the same kind of work is also done in the different founderies and machine shops. Also that there is one shop for forging steamboat shafts, etc. It runs two hammers by steam power. Louisville now needs a much larger establishment of this latter kind—the most of the work of this heavy kind having to be done at Pittsburg. The present facilities can never supply the large and increasing demand for heavy forging. All the heavy wrought iron for our water works had to be obtained in Pittsburg; and one of our most valuable citizens and manufacturers lost his life in going up there to superintend the job. There is a fortune and a name for some enterprising man who will come to Louisville and establish a superior forging shop.

BREWERIES.

There are fourteen breweries in Louisville, and they employ an aggregate capital of \$150,000, and 64 hands. They do business to the amount of \$164,000 a year. The immense quantities of barley consumed by these establishments is procured—for the most part—from the farms of the surrounding country.

SHIP BUILDERS.

There are three ship yards, at which about fifteen steamboats are built each year. Most of the boats built here are of a superior class—such as are used in the south-western waters. The character of the boats built at Louisville for speed, capacity, and elegance of finish is unsurpassed. A large proportion of those hulls built at Jeffersonville, Ind., are finished here. The amount of business done in this department is about \$250,000 a year.

GLASS WORKS.

This branch of business was commenced here in 1850 by Mr. John Stanger, a practical glass manufacturer. There is one establishment of this kind, having one seven-pot furnace, and uses 80 tons of soda ash, 350 tons of sand, 1000 bushels of lime, 75 barrels of salt, 25,000 bushels of coal, and \$2,500 worth of lumber per annum. They employ \$38,000 capital, and 60 hands. They manufacture \$65,000 worth of ware, three fourths of which is sold in the city. The vast quantity of window-glass sold in this market makes it very desirable that a first class manufactory should be established here; and we hope these worthy gentlemen—now so fully established in the glass business—will find it convenient, as well as to their interest, to open such a factory here.

There is also one glass-cutting factory here, where considerable business is done, and much more might be done. The work executed is well done, and the shop deserves better patronage. Why do our people send their orders East, and thus leave their own mechanics to struggle against discouragement! We

hope to see this establishment better sustained, as it deserves to be. It now does business to the amount of about \$2,000 a year.

GLASS-STAINING.

There are several establishments where this business is carried on, and we risk nothing in saying that our mechanics can and do execute some of the finest and most elegant jobs in this line to be met with in the western country. The demand for this beautiful kind of work is increasing, and our city is well represented by practical mechanics of much skill and taste.

COOPERS.

The demand for cooperage has steadily increased for many years, and is still increasing faster than ever before. This is owing chiefly to the increase of the pork and beef packing, yet not altogether, for there has been a vast increase in the manufacture of flour the last few years. There are at present twenty-six cooper shops, many of them of large size. They employ \$27,900 capital, 206 hands, and do business to the amount of \$200,000 per annum. The country adjacent to the city furnishes an immense amount of cooperage besides all that is made here.

LUMBER YARDS.

There are fifteen lumber yards, employing a capital of near \$500,000. They give steady employment to 60 hands, and their sales amount to about \$1,000,000 per annum. Some of these firms own extensive lumber lands, and also mills in the mountains, which are not reckoned in the above statement.

IVORY BLACK.

We have one establishment of this kind, which has existed for several years. The article being used chiefly in refining sugar, the sales are mostly to the South and at St. Louis. The article made here is equal to any, we believe, and can be supplied as fast as required. Why have we not a sugar refinery in Louisville? It is one of the finest grocery markets in the whole country, and certainly ought to be able to supply this article to her thousands of customers without having to be in the condition of a mere commission house for other cities.

SOAP AND CANDLES.

There are six of these establishments, two of them of immense capacity. The total capital employed in the business, as nearly as we can ascertain, is \$230,000, and it furnishes constant employment to 103 hands. The annual sales amount to \$600,000. The candles manufactured in Louisville are superior to those made elsewhere, so say the consumers with whom we have conversed. Our city is well prepared to turn them out by the tens of thousands per day. Formerly, Cincinnati supplied us and a vast extent of country southwest of us, but that day has gone by, and Louisville is even supplying many customers east of Cincinnati, and it was by them that we were assured of the superiority of the Louisville candles.

BRUSH FACTORIES.

There are three of these, employing \$10,000 capital and 30 hands. The sales amount to \$10,000 per annum. These shops turn out all kinds of brushes, such as horse, shoe, scrubbing, dusting, white washing, cloth, and paint brushes. They also make beautiful fancy brushes for the hair, etc. They prepare large quantities of hair and bristles for market.

COMB FACTORIES.

We have three comb factories, employing five hands. They furnish all sorts of combs, and sell about \$4,000 worth of their own work a year.

FILE FACTORIES.

There is one file factory, where all kinds of files are made. The firm is pre-

pared to furnish files equal to the best English article, and will sell them as cheap as they can be furnished any where in America. They warrant their files equal to any made in Europe or the world, and solicit patronage.

We sincerely hope they will be sustained, for our carpenters assure us that their files are better than any they can buy elsewhere.

TOBACCO FACTORIES.

There are eight of these in the city, and they employ \$150,000 capital, and 529 hands; and they do business to the amount of \$665,000 a year.

This business has largely increased, and there seems to be a better prospect now than ever before. Louisville is attracting more attention every year as a tobacco market, and therefore the business of manufacturing other things being equal, must increase also.

Besides the above there are 74 segar factories, employing 521 hands, and doing business to the amount of \$682,500.

COTTON FACTORIES.

There are two cotton factories where some yarns are spun, but they are chiefly engaged in making batting. It is contemplated to enlarge one of these factories this season, and enter into the business of spinning cotton extensively. Formerly cotton spinning was carried on here to a considerable extent, but several disastrous fires exhausted the means of those in the business, and not until now has the subject attracted much attention since. The prospects are that a few months more will witness the hum of many spindles. The two factories now in operation were commenced by men of limited means, and have been conducted with much economy and industry. They employ a capital of \$12,000, 23 hands, and do business to the amount of \$30,000 a year.

BELL FOUNDRY.

The well established shop of Mr. Wm. Kay, makes superior church, steam-boat, tavern, and other bells. Capital invested \$15,000; hands employed six; and yearly business done \$22,000. The bells made here are very popular wherever known.

ALCOHOL AND PURE SPIRIT FACTORY.

There is a manufactory of alcohol and pure spirits. Capital employed \$40,000, and ten hands. Business done in a year \$150,000

CHAIR FACTORIES.

There are three of these, where chairs alone are made, besides several others connected with furniture and cabinet shops. They have about \$20,000 invested, employ 87 hands, and do business to the amount of \$47,800 a year. Every variety of chair may be obtained in these shops, and as cheap as any where else. One of these firms keeps a large mill in the country, a few miles from the city, in constant operation, preparing the material to put together here. Thus all their sawing, turning, etc., is done in the country, where timber is abundant and cheap, and the work is all put together in the city.

MILL AND MILL-STONE FACTORY.

There is one establishment where portable and plantation mills, mill-stones, bolting cloths, etc., are manufactured. This shop has been long established, and is favorably known. They employ \$20,000 capital, 20 hands, and \$25,000 worth of business is done annually.

POTTERIES.

We have four potteries, where earthen or brown ware, and also stone ware, are manufactured in all their varieties. They employ \$15,000 capital, and do business to the amount of \$15,000 a year.

WHIP FACTORY.

There are two whip factories, employing four hands, and making whips of all kinds, and in considerable quantities.

CHILDREN'S CAB AND CARRIAGE FACTORY.

There is one shop engaged in making carriages and cabs for children. These articles are of very superior workmanship, and as handsome and tasty as any thing of the kind in the United States. Orders to any amount can be filled on short notice.

CARRIAGE FACTORIES.

There are sixteen carriage shops. Capital invested \$168,000, hands employed 132, amount of sales per annum \$275,000. This is a very favorable point for this business, as these luxurious articles are very generally used here. The trade in carriages at this point has long been an important feature of our business. Carriages of very superior style and workmanship are turned out in great numbers from our work shops. Every department is conducted by skillful and practical mechanics, and articles of great strength and exquisite finish may always be seen in the sales-rooms of these factories.

FLOUR MILLS.

There are eight flour mills in operation, having an aggregate capital of \$240,000, employing 60 hands, and doing business to the amount of \$753,500 a year. They have 28 run of stones, and can manufacture 1175 barrels flour per day. This business is on the increase here, and our city bids fair to become one of the greatest flour markets in the land. It is worthy of remark that Messrs. Smith & Smyzer, despising the old foggy objections to the water power of the falls, have, at vast expense, excavated a race and built a very large mill, with five run of stones, on the Indiana side of the river. This mill uses only water power, and can manufacture flour at a cost of ten cents per barrel.

CORN MILLS.

There are two corn mills, with four run of stones. They grind meal and feed to a large amount.

LARD OIL

There are five lard oil factories; capital \$100,000, 75 hands employed, and sell \$146,000 worth of oil per annum.

Most of these establishments manufacture soap and candles also, and one of them makes rosin oil, and a very superior lubricating oil. Recently, one of these firms has engaged in manufacturing coal oil, and is prepared to fill orders to a large amount.

MUSTARD AND SPICE MILLS.

The famous Kentucky mustard is manufactured in this city, and these mills are doing an immense business in that article. They also do a large business in spice and coffee, which is prepared in the most approved manner. They manufacture the "Great Western Blacking" also, and have a large trade with the south-west in all these articles. There are two spice mills in the city.

ROPE AND CORDAGE.

We have two steam rope and cordage mills, employing 170 hands, consuming 4,400 tons of hemp per annum, and selling rope and cordage to the amount of \$550,000 a year. The machinery in these mills is as near perfection, we think, as can be reached in this important branch of business. The hemp is taken from the farmer's wagon, dressed, spun, laid, coiled or reeled, and delivered ready for market, all by machinery. And the work is done so fast, so well, and so uniformly smooth and even, that no hand spinning can compare with it. The days of hand spinning are over, and the only use of hands now is to superintend these wonderful machines.

To describe these machines is more than we can do, but we almost imagined them endowed with reason, as we gazed upon their ceaseless and unflinching performance of every one of the numerous and various manipulations necessary

to complete the transformation of raw hemp into cordage. A large quantity of the products of these mills is sold in the eastern markets.

WOOD WORKS.

By this term we mean a manufactory of wagon and carriage materials, such as hubs, spokes, felloes, shafts, single and double trees, wagon bows, etc., etc. There is one mill with \$20,000 capital, employs 15 hands, and sells \$20,000 worth of work a year. This mill can fill orders to any amount, and will warrant all work sold, both as to material and workmanship, and will sell as cheap as any shop in the United States.

SARSAPARILLA AND PATENT MEDICINE.

We have eight or ten, some of them large and important, manufactories of the above kind. They make and vend immense quantities of their goods, and thus furnish employment to a considerable number of hands. This branch of business, centering here, and extending its sales nearly all over the United States, amounts to many thousands of dollars per annum.

PUMP AND BLOCK FACTORIES.

There are six of these, some of them making pumps alone, without enumerating those who make metallic pumps. They employ 30 hands, and do work to the amount of \$25,000 a year. Pine for pumps and spars is brought here from the upper rivers in great quantities, both white and yellow.

BOOT-TREE AND LAST MAKING.

There is one shop engaged in this business, from which articles in that line can be furnished to order and of good quality.

CARPET WEAVING.

There are two pretty extensive carpet weaving establishments, and besides these quite a number of private weavers, who carry on the business in their dwellings. They manufacture a great deal of rag carpet, some of it of very handsome patterns, and also much carpeting of more substantial and elegant material, as well as more chaste and beautiful patterns. All the dying and coloring necessary in the business is done by the same parties.

CORN-BROOMS AND WISPS.

A shop for the manufacture of these useful articles has been in successful operation here for some time, and is doing business to the amount of \$6,000 a year. Every variety of corn brooms and wisps for clothes are made in the neatest and most durable manner.

GOLD AND SILVER MANUFACTORIES.

There are three manufactories of gold and silver ware in the city, one of them is devoted exclusively to the manufacture of gold ware, and the others principally to that of silver ware. About \$20,000 is invested in the business, and 20 hands are employed. Rings, ear-rings, breast-pins, bracelets, etc., of gold, and of the finest qualities, are made. Also of silver ware, pitchers, goblets, tumblers, spoons, etc., in great variety.

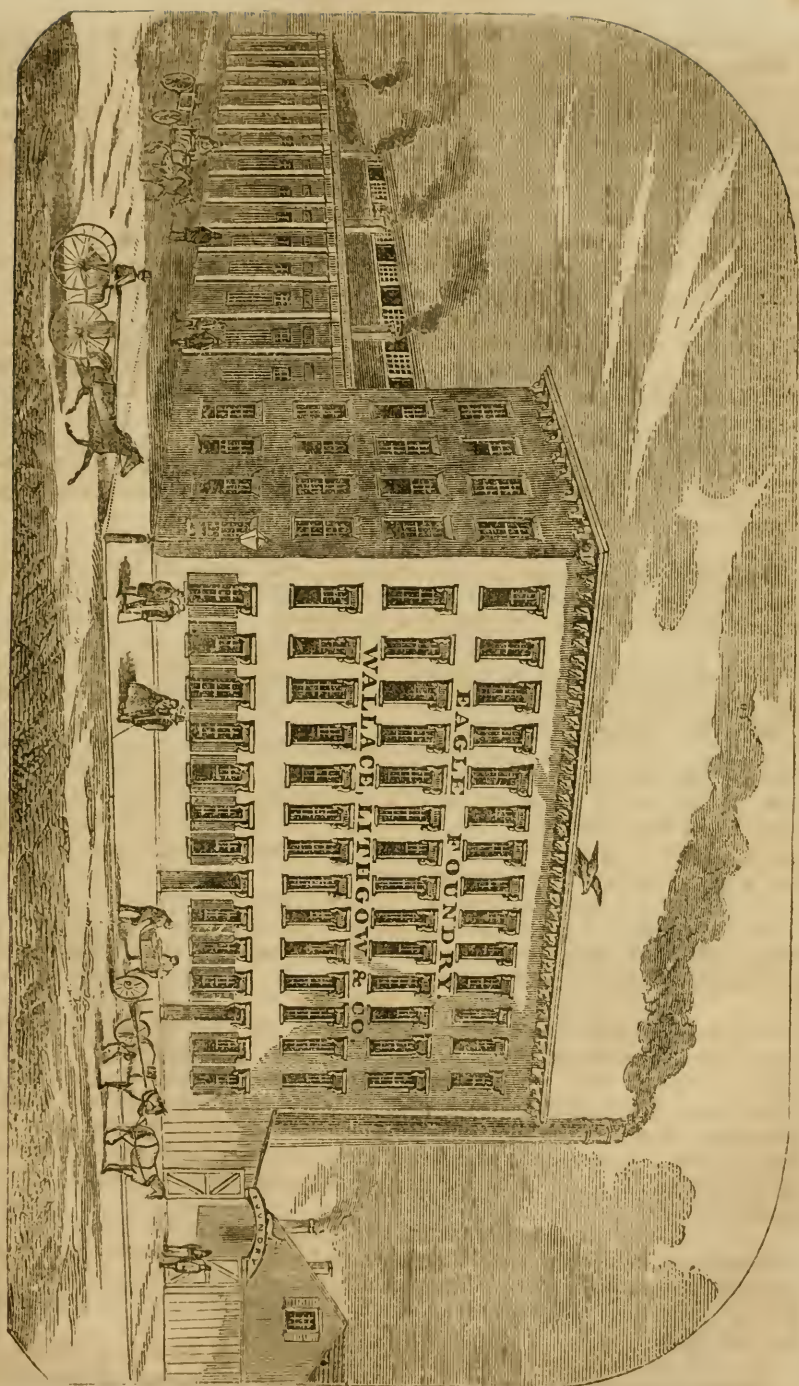
We will here state a fact for the information of all concerned: Both gold and silver ware made here, and offered to our merchants and refused, was afterward sold to New York dealers, by them sold to our merchants at an advance of 40 per cent., and brought back to Louisville to sell to their customers as New York ware.

Our gold and silver manufactories are prepared to execute orders for fares, families, and dealers as well, and on as good terms, as any other parties. The above does not include the numerous watch and jewel dealers and repairers of the city.

PLANE MANUFACTORY.

We have one factory of this kind, which employs five hands. They turn out work of the first quality, and deserve public patronage.

EAGLE FOUNDRY, CORNER MAIN AND CLAY STREETS.



ENGRAVERS ON METALS AND WOOD.

There are four establishments for engraving, and their work will compare favorably with similar jobs from other shops. The demand for wood-engraving for book and job work, as also for metallic engraving, is far beyond the capacity of these establishments, and it is constantly increasing. Much of this kind of work has to be sent East at heavy expense and loss of time. The city greatly needs a first class engraving house, and would sustain it well.

VENETIAN BLIND MANUFACTORY.

We have one shop devoted exclusively to this business, where work of the best quality is executed in the best manner. Blinds of every pattern, and with all kinds of hangings, together with elegant show cases, are made to order.

CONFECTIONERIES.

A number of these sweet-meat and candy establishments are here, and articles in this line as elegant, as sweet, and in as great variety, can be found here as any where. These articles are made in large quantities and sold all over the country.

STOCK OR COW-BELL FACTORIES.

We have four of these establishments. They turn out \$75,000 worth of bells per annum. They ship large quantities of bells to Central America and South America.

WIRE CLOTH WEAVING.

This business is carried on to the extent of one hundred dozen sieves per week, besides several other articles made at the same establishment. The amount of these articles made in a year is \$35,000.

WIG AND ORNAMENTAL HAIR.

Two houses are extensively engaged in this business, and wigs for the old, and curls and braids for the young, of all colors and descriptions, are made to order. They employ twelve hands.

BELLOWS FACTORIES.

There are two of these. They manufacture all kinds of bellows, and sell about \$50,000 worth per year. It is gratifying to see how fast, and how substantial and neat, the steam bellows factory can turn out these windy instruments. If you want to be "puffed" or to "raise the wind," these gentlemen can help you to your heart's content.

GAS AND STEAM FITTERS AND PLUMBERS.

Six shops carry on this business extensively. All kinds of plumbing, gas-fitting, and other work in this line, is elegantly and substantially done. Some jobs which we have seen were superb.

WOOLEN MILLS.

We have two mills, one employing 15 hands, the other 35. They manufacture \$130,000 worth of goods per annum. They spin and weave chiefly the coarser article of jeans. These establishments are very important to our city, and we hope to see them increase in capacity and number. One of these mills is of recent origin, and exhibits many evidences of taste and practical knowledge. It is of brick, spacious, and well arranged, with power to drive a large number of spindles and looms. It is now turning out packages of Kentucky jeans very rapidly.

WILLOW BASKET AND WILLOW WARE.

Five shops are devoted to this business, and turn out vast numbers of cradles, baskets, carriage bodies for children, chairs, etc. Their baskets are of all sizes from the mammoth clothes basket, down to the ladies fancy basket for her toilet or work table.

FANCY WOOD, IVORY, AND IRON TURNING.

Turning in wood, ivory, etc., is done at four shops. There are many others

of a larger and more common kind, but these do a fancy and ornamental kind of work. Fancy boxes, toilet articles, etc., etc., are fabricated with taste and neatness. They employ ten hands.

WEBBING AND STOCKING WEAVING.

There is one manufactory of this kind, where stockings, webbing, and garments are woven by machinery. Boys' and men's coats are woven or knit by machinery, looking like stocking work. May our German stocking weaver abundantly prosper.

LOCK SMITHS AND SAFE MAKERS.

Two shops carry on lock making in all its branches, from the mammoth bank lock, down to dwelling house or furniture locks. Their large locks have the character of being burglar proof. They also, as well as other shops in the city, manufacture fire proof safes.

There are, besides the above, many of the more ordinary locksmiths.

BOILER YARDS.

There are two yards devoted exclusively to this business, besides several others, connected with foundries and machine shops. These two have a capital of \$20,000 invested, employ 35 hands, and do business to the amount of \$80,000 a year.

PLOW FACTORIES.

There were two of the above factories, at the time we canvassed the city, a few weeks ago, but others have since commenced operation, and we can not now give the exact number. We speak here of shops that make only plows, there being many plows made in other shops.

One of our plow manufactories is an establishment of large size, and admirable arrangement. Every branch of the business is carried on under the same roof, and is done in the most workmanlike manner. Capital invested in the business, \$60,000; hands employed, 40; and sales per annum, \$70,000. Besides these, there are many of less note, or connected with other branches. No doubt there are more than \$100,000 worth of plows sold from our shops annually. A very large proportion of this work goes to the South, and the South-west. More than 15,000 plows are made and sold annually by one shop.

BAKERIES.

There are a great many bakeries of the ordinary kind, and we would not speak of them particularly, but for the purpose of calling attention to two establishments, which we regard as rather extraordinary, in this line of business. One of these has a capital of \$8,000 invested, employs 26 hands, and consumes 150 barrels of flour per week. The other is not so large, but is a most excellent bakery, and does an immense business. They manufacture all kinds of bread, biscuits, cracknels, crackers, &c., in large quantities, and are always prepared to fill orders on the best terms and to any amount.

UPHOLSTERING BUSINESS.

There are seven upholster shops, having \$30,000 invested, employing 55 hands, and doing business to the amount of \$75,000 a year. We believe we have seen work done by some of these shops, that was equal to any ever done in the United States.

WHITE LEAD AND LINSEED OIL.

These articles are extensively manufactured by one firm. They employ 50 hands, and manufacture 62,000 kegs of lead, 2,500 barrels of linseed oil, and 500 tons of oil cake per annum—total value \$209,000. This establishment is one of the best we have ever seen, and richly deserves a liberal patronage not only because it is so much needed here, but because of the excellency of the articles they manufacture.

HYDRAULIC CEMENT.

There is a vast amount of this valuable article manufactured here. The business employs 75 hands, and the sales amount to about \$100,000 a year. The character of this cement is now so well established, that it is preferred to all others, wherever it can be obtained. Dr. Owen, the State geologist, shows that the rock holds the ingredients, in the exact proportions to make a first rate water cement; and at a recent overflow of the tide at New York, where many cellars were flooded, those cemented with the Louisville water-lime, alone withstood the flood; all others leaked, and subjected their contents to loss and damage by water. The bed of the river is formed in a great measure, of this water-lime, and the supply is therefore inexhaustible.

COPPER, TIN, AND SHEET IRON WORK.

We include under this head, those shops that manufacture stills, large boilers, pipes, heaters, chimneys, breeching, &c., &c., but none of the ordinary tin shops. There are five shops as thus defined; they employ \$60,000 capital, and 30 hands, and do business to the amount of \$75,000 a year.

BEDSTEAD MANUFACTORY.

There is a factory, commenced a few years ago on a small capital, which, by energy, industry and economy, has grown to importance. It now gives constant employment to 20 hands, and makes \$30,000 worth of bedsteads a year. Though twice enlarged since it commenced, it can not now fill orders as fast as they come in. All kinds of bedsteads are manufactured, and of the best material. It is contemplated to erect still larger buildings, and a new engine, which will be adequate to the increased business.

FURNITURE MANUFACTORIES.

There are more than twenty houses where more or less furniture is manufactured, and as many more, where foreign manufactured furniture, only, is sold. About 255 hands are employed in the different shops, and about \$350,000 worth of work is done per annum. Two establishments have recently gone into operation, which give promise of much benefit to this department of our manufactures. Our furniture dealers have done themselves and the city harm, by not directing their attention more to manufacturing. They have been in the habit of importing hundreds of thousands of dollars worth of furniture every year, when they ought to have manufactured it, and thus retained the money here, and built up immense manufactories, such as they have helped to build in other places.

We have all, or even more facilities here for manufacturing furniture, than other places. The raw material is abundant, more so than at any place we know of, and enterprise is all that is needed to bring it here in any quantity that may be needed. Very recently, one of the largest furniture dealers in our city assured us that he regretted the course that has been pursued, and told us that he believed this one of the best points to establish a furniture factory, in the country. He said, nothing but his domestic affairs kept him from going into the business. It is a matter of rejoicing, that this error is seen, for it will doubtless, now find a remedy. Let those already manufacturing push on, and let others commence. A fortune awaits some enterprising man who will enter this inviting field.

Since this was written, a large factory has been commenced.

HORSE SHOE AND WROUGHT NAIL FACTORIES.

There are four of these, employing 8 hands, and making nails to the amount of \$8,000 a year.

IRON RAILING, VAULTS, SAFES, AND DOORS.

We have four of these shops, employing 43 hands, and doing \$80,000 worth of work per annum. They manufacture plain and ornamental railing, fire-

proof doors, vaults, safes, and jail and bank work. A fine new factory has lately opened.

AGRICULTURAL IMPLEMENTS.

The manufacturing of agricultural implements is a comparatively new business here, only a few years having elapsed since the first factory was opened. There are now two such establishments in operation, having \$180,000 capital invested, and giving employment to 235 hands. They manufacture \$353,000 worth of work a year. This is an immense business, and has all grown up within three years.

One of the proprietors of one of these establishments was the pioneer in the seed and agricultural business in our city. In 1857 he sold out, and directed all his attention to manufacturing. The list of articles manufactured in these immense establishments comprises threshers and cleaners, mowers, reapers, straw cutters, fodder cutters, corn shellers, cider mills, road scrapers, horse powers for 2, 4, or 8 horses to work with band wheel or tumbling shaft, cotton planters, hay presses, portable saw mills, and portable locomotive engines for farm and plantation use.

GUN SMITHS.

There are eight gun smiths, and the business gives employment to fifteen hands.

LOOKING-GLASS AND PICTURE FRAMES.

Four houses are engaged in this business. They are well prepared with every variety of material and machinery to manufacture the most elegant looking-glasses, picture frames, etc. Capital invested \$77,000, hands employed 43, and goods manufactured to the amount of \$109,000 per annum.

SILVER AND BRASS PLATING.

This business is carried on chiefly by those engaged in other branches, of which this forms a part, such as carriage makers and trimmers. There is, however, one shop where it is carried on exclusively, and gives employment to three hands. About \$3,000 worth of work is done in a year in this shop.

SADDLE, HARNESS, AND TRUNK MAKING.

There are twenty-one of these manufactories. They give employment to 158 hands, and manufacture and sell to the amount of \$350,000 a year. This branch of business is well represented in our city, and the best of work is done here.

FOUNDRIES AND MACHINE SHOPS.

There are seven of these establishments. They employ an aggregate capital of \$400,000 in the business, and give constant employment to 540 hands. Their aggregate business amounts to \$560,000 a year. All kinds of heavy castings are made, but their business is chiefly the building of steam engines, mill, and other machinery. One of them has just made the immense iron bridges for the Louisville and Nashville Railroad to cross Green and Barren rivers. Another is now casting the immense and powerful machinery for the city water works, the walking beams of which weigh twenty tons each, and the steam cylinders ten tons each.

BRASS FOUNDRIES.

There are two of these; capital \$12,000, hands employed 10, and they do \$20,000 worth of work per annum.

ARCHITECTURAL FOUNDRIES.

There are two foundries devoted to casting fronts for houses, columns, lintels, sills, brackets, counters, pavements, and many other things used in building. Some of their work put up in this city is so elegant, so chaste, and so substantial, that every beholder admires it. Capital in the business \$55,000, hands employed 90, and \$100,000 worth of work sold in a year.

STOVE AND HOLLOW-WARE FOUNDRIES.

Three foundries carry on this business in all its branches, and one of them is now building a new house or houses for the accommodation of its increasing business. These are very large establishments and equal in every respect to any of their kind in the West. Their beautiful wares, of every style and variety known to this branch of business, are equal to those of any other place in the country. One firm manufactures every style of marbleized mantels, a most beautiful article. Capital in the business \$280,000, hands employed 275, business done \$528,922 per annum.

ROLLING MILL.

This is the largest and most prominent manufacturing establishment in our city. It is under the control and management of Mr. T. C. Coleman, the President of the Company, an active and enterprising business man, and the largest stockholder.

This mill is famous for making the best iron in the United States, and which has a preference over all other iron where it has been introduced. The iron has been frequently tested, and it is found that the stone coal iron made in this establishment will sustain or resist a pressure of from 60 to 64,000 pounds to the square inch, and the charcoal iron will sustain or resist a pressure of from 75 to 80,000 pounds to the square inch. This is a strength not attained by any other iron made in this country, some of which has not a greater strength than 38,000 pounds to the square inch. Swedish iron is estimated to tear asunder under a pressure of 72,064 pounds, but any iron that will resist or sustain 55,000 pounds to the square inch, is considered very good, no matter where made. The Louisville iron is very much sought for by bridge builders, in consequence of its great tenacity and strength, and has been extensively used for bolts for the railroad bridges in Missouri, Indiana, and Ohio, as well as in this State. The Louisville and Nashville Railroad Company are now building iron bridges over Green and Barren rivers, all the wrought iron for which was made at the Louisville Rolling Mill. It was all tested by Mr. Albert Fink, the well known engineer and bridge builder, who has the contract for these bridges, and under whose superintendence the iron bridges of the Baltimore and Ohio Railroad were all built;—who certifies that this iron procured from the Louisville Rolling Mill Company exhibited in every way during the tests its great tenacity and strength, and that "it is the best iron he has ever seen or tested."

The Louisville Rolling Mill Company have a cash capital of \$300,000; employ about 135 men; make about 3,000 tons of finished iron a year; and sell it all at home, not having any agents. They use no metal made from stone coal or coke; none but the first quality of charcoal blooms and pig is ever used in their mill.

HYDRAULIC FOUNDRIES AND MACHINE SHOPS.

One large establishment is devoted to this business, and turns out every variety of hydraulic machinery, besides portable and stationary steam engines, fences, and many other articles. Capital \$75,000, hands employed 130, business done in a year \$100,000.

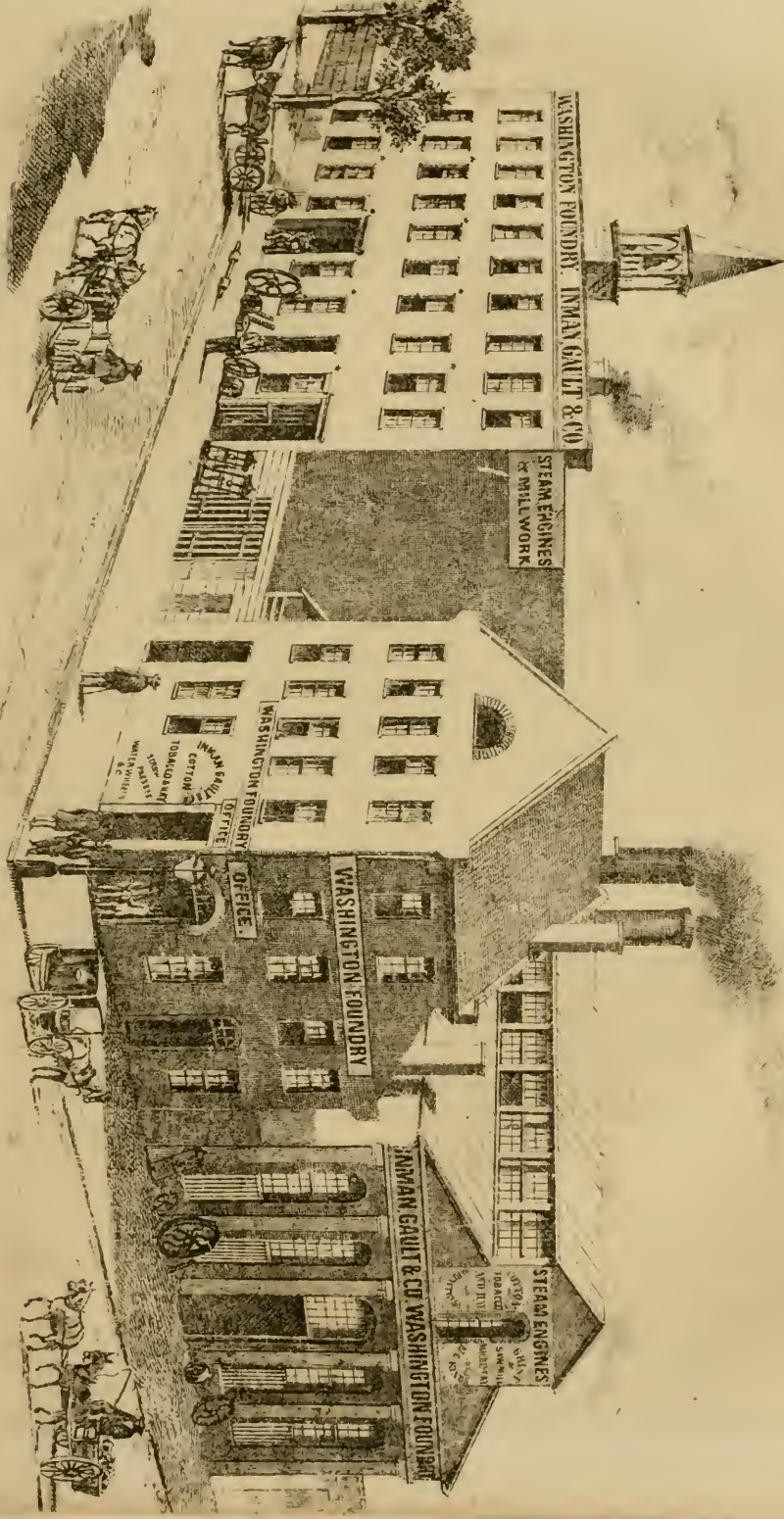
MACHINE AND FINISHING SHOPS.

There are three of these, where steam engines are built, and mill and much other machinery is made. Capital \$20,000, hands employed 20, annual business \$40,000. These are finishing shops only, and do not do any casting. One of these shops is being enlarged to double its former size and capacity.

WHEEL-BARROW FACTORY.

This business was commenced last year on a small scale, and such has been its success that the firm are now erecting a new and larger factory. They manufacture railroad and levee wheel-barrows, and for all purposes where earth has

JUDMAN, GAULT & CO.



WASHINGTON FOUNDRY. Corner of Main & Ninth Streets, LOUISVILLE, K.

to be removed. They are now making about 50 a week, but will soon turn them out much faster. They are made of oak and iron, and put together very strong. Orders for these articles can now be filled as well here, and on as good terms, as any where.

PIANO FORTE MANUFACTORY.

This business is carried on extensively by one firm, and more or less is done by smaller establishments. The largest firm has \$60,000 invested in the business, employs 62 hands, and manufactures instruments to the value of \$110,000 per annum. They turn out an average of eight pianos a week, and their instruments are pronounced equal to any in the market. They expect soon to make an average of ten a week.

MUSIC PUBLISHING.

Three houses are engaged in publishing music, and do an immense business in this line.

ROPE AND BAGGING FACTORY.

There is an extensive steam factory for making rope and bagging, where the most improved machinery is doing the work as fast and as well, perhaps, as any where in the West.

TERRA COTTA WORKS.

This business is carried on in all its branches by one establishment. It is, however, a very extensive one, and although constantly receiving orders, even from down South, manages to keep up with the demand. It is now ascertained that a very superior clay for chimney tops, vases, window caps, brackets, and even garden statuary, exists in the immediate vicinity of this city. Hence this beautiful work is becoming very common. Tiling for roofs is now made here, and has been adopted by some of our most intelligent citizens. The ornamental copings, cornices, brackets, caps, etc., of the cathedral were made at this establishment, and will doubtless stand as well as the stone used in the vast edifice.

COMPOSITION ROOFING.

This is carried on extensively, and gives employment to a large number of hands.

COTTON HOOK MANUFACTORY.

Cotton and hay hooks are made at one shop. Orders will be filled as well and as cheap as by any other. All work warranted.

PAPER MAKING.

There is one paper mill, where the latest and most approved machinery is turning out paper of excellent quality at the rate of 4,000 pounds a day. Capital invested \$70,000, hands employed 90. The mill consumes 6,000 pounds of rags per day, and makes 100,000 pounds of paper per month. Such is the demand for paper that this mill runs day and night the year round, except Sundays. The establishment is now being enlarged by the erection of a building 140 feet long by 30 feet wide, and three stories high.

LITHOGRAPHIC ENGRAVING.

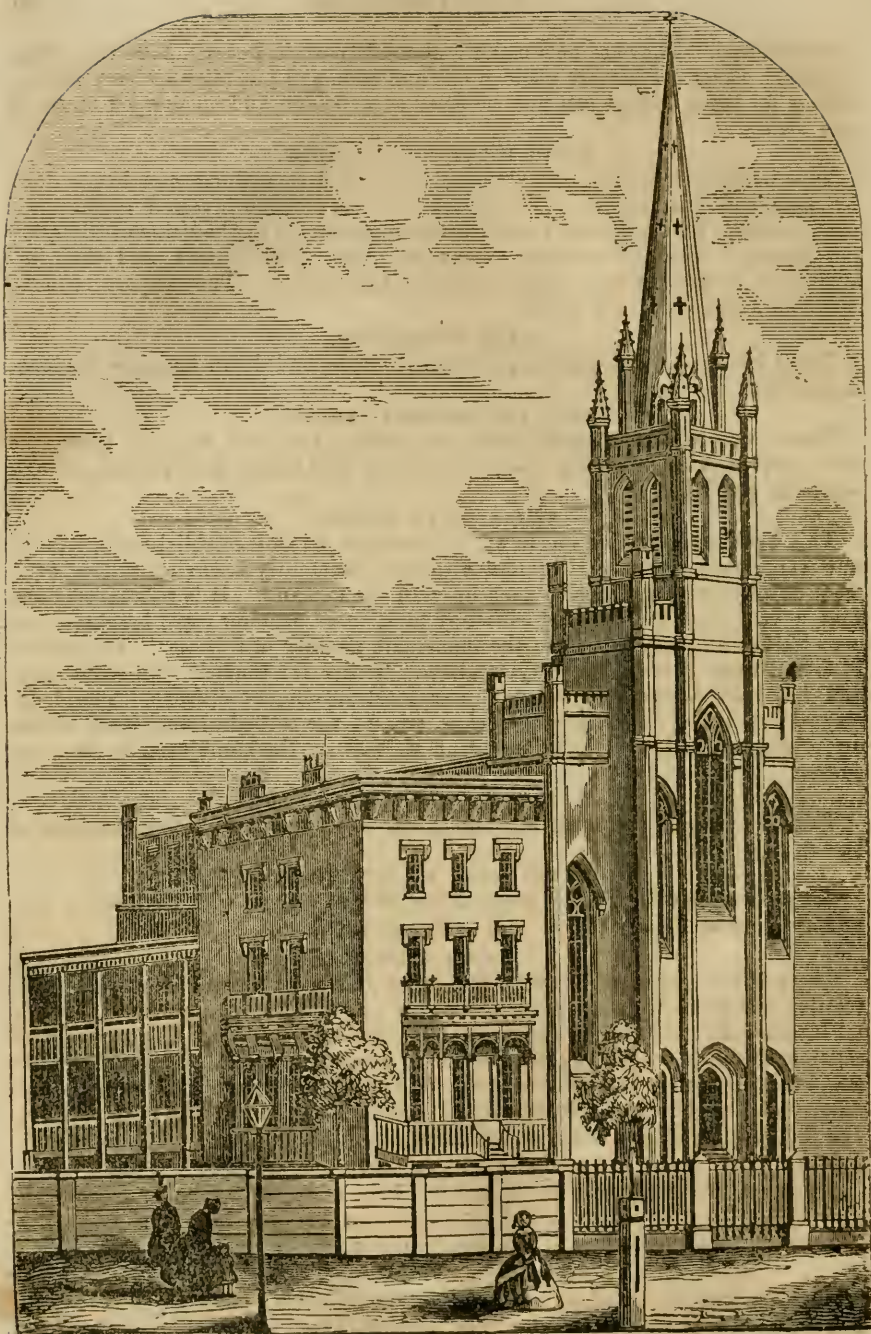
There are two establishments where this kind of work is done, and they employ 19 hands. All kinds of lithographing can be done here that is done in the eastern cities, and done as well and as cheap.

GILDING AND PLATING.

This business is carried on by several shops in all its varieties, and gives employment to a number of workmen, though in every instance except two, the business is connected with other branches.

SURGICAL INSTRUMENTS AND TRUSSES.

These are manufactured in great variety and perfection at two establishments.



ST. PAUL'S EPISCOPAL CHURCH, SIXTH STREET, NEAR WALNUT.

OPTICAL AND SPECTACLE MAKING.

This business is carried on by one establishment, and seems to be worthy of public confidence and patronage. We hope to see this establishment encouraged.

GOLD PEN MANUFACTORY.

This is carried on by one shop, and gives employment to five hands. Their pens are very good—equal, as far as we can judge, to any in the market, and as cheap as can be bought any where.

MARBLE WORKS AND STONE-YARDS.

This business is extensively carried on at 15 yards, many of them working marble. Capital invested about \$80,000, and hands employed 150. In one of these establishments steam is used to saw stone, and large works have been erected for the purpose. All kinds of marble and stone work can be had here of the best quality and as cheap as any where else.

BAND AND FANCY BOXES.

These are made by several persons, and by some of them very extensively.

SCALE MANUFACTORY.

This is carried on by one firm exclusively, and gives employment to eight hands. They make hay, depot, coal, and cattle scales of all sizes and of the best quality.

OIL CLOTH AND WINDOW SHADES.

This business is carried on by three large shops, and their work is equal to any we have seen, both as regards variety and durability. Very beautiful patterns or designs are executed, and we have never seen better or finer.

BONE MILL FOR MANURE.

This new branch of business is carried on by one steam mill. It is capable of grinding 50 bushels of bone manure per day. The ground bones are regarded as excellent manure, and are used by our gardeners. Two barrels, of 180 pounds each, are sown to the acre of land, and this suffices for five or six years.

ORGAN, MELODEON, AND ACCORDEON MANUFACTORY.

There are four establishments where these instruments are manufactured. They make church organs, parlor organs, and organs for public halls equal to any in the United States, and will warrant them as such. Also the smaller instruments equal to any.

ORNAMENTAL CARVERS AND SCULPTORS.

Two shops carry on this business in all its varieties, and execute very superior work.

FRET AND SCROLL SAWING.

Two mills execute work of this kind—chair backs, scroll, fret, furniture cornice, brackets, etc., as delicate and beautiful as ever was done any where. Cabinet and piano makers can be furnished with these articles as neat and perfect as any where in the world.

VARNISH MANUFACTORY.

There is one establishment where all kinds of varnish is made. They warrant their goods as good and as cheap as any.

SADDLE-TREE MAKING.

One shop carries on this business, and turns out thousands of dollars worth of saddle trees equal to any in quality and price.

LOUISVILLE CHEMICAL WORKS.

This very complete laboratory, erected by Prof. J. L. Smith, of the Medical Department of the Louisville University, is now in complete and successful operation. The buildings and machinery are well adapted to the purposes for which they were erected, and are capable of great extension, the lot being 150 by 250 feet. The list of chemicals and other products is a very extended one, and is daily receiving additions of preparations of value as they appear.

We have seen testimonials from the first medical professors of the western country, testifying to the strength, purity, and superiority of the preparations of this establishment over all others in the market. These testimonials are strong and numerous. The chloroform, Hoffman's anodyne, blue pill, and sweet spirits of nitre manufactured here, are especially commended for their strength and purity. The mills for powdering the more important drugs are of the most approved construction, and these articles can be furnished of warranted purity, and in any quantities that may be desired.

PRINTING OFFICES.

There are ten printing offices, doing a large amount of business, and giving employment to about 175 hands.

BOOK BINDERIES.

There are six of these, where book-binding and manufacturing of blank books is carried on extensively.

GLUE FACTORIES.

There are two glue factories, where the business is carried on extensively.

LUCIFER OR FRICTION MATCHES.

One establishment manufactures large quantities of these, and they are pronounced by those who have used them to be of excellent quality.

FACILITIES FOR MANUFACTURING.

RAW MATERIAL.

IRON.—The article of first and chief importance in manufacturing communities, is abundant and of superior quality in this market. Our manufacturers have the advantage of being convenient to all the best furnaces in this country where the best charcoal pig metal is made. They can get with facility the metal made at the following furnaces, which is equal, if not superior, to any other made in this country, viz.:

Iron Mountain Company, Missouri.

Red River Furnace, Kentucky.

Belmont " "

Nelson " "

Hanging Rock Furnaces, Ohio,

And from all the furnaces of Greenup county, Ky., and those along the Cumberland and Tennessee rivers. Belmont and Nelson Furnaces are on the line of the Louisville and Nashville Railroad, only a few miles south of the city, and all the others are on our great rivers. It is a fact worthy of remark that a large proportion of the iron used by the manufacturers at Cincinnati, Wheeling, and Pittsburg, is taken by steamboats from furnaces below Louisville, and consequently costs more than the same article does at Louisville. This is especially true of the better qualities of iron. Our situation is peculiarly favorable for procuring this most important and valuable article, for besides being convenient to us, it is inexhaustible and of the best quality. So testifies the highest authority. It is a fact, that pig iron from some of the above named furnaces, and manufactured in this city, is superior to the best Swedish iron. It has been repeatedly tried here in Louisville, and uniformly bears a greater strain than the best Swedish iron. Testimonials to this effect, and from the first engineers of this country, now lie before us.

TIMBER and lumber of every description is as abundant and as cheap here as at any city in the West or in the Union. Our native forests furnish oak, hickory, ash, maple, walnut, cherry, poplar, cedar and many other kinds of timber, equal to any in the world. We get white pine lumber in common with all Ohio river towns from the Allegheny river. Yellow pine is abundant in our

own State, and comes to us from our own rivers. The best of oak for steam-boat building is abundant, while walnut, cherry, and poplar for manufacturing furniture, is found in the forest all round the city.

WOOL is produced in all the country around Louisville, and can always be had on as good terms as at any other point. Immense manufactories of woolen goods can be sustained here. There are many woolen mills scattered through the interior of Kentucky, most of them small establishments, and manufacturing coarse linsey and Kentucky jeans, yet establishing the fact that this branch of business may be very profitably carried on here. Mills of the first class and making the finer qualities of woolen goods would, no doubt, do well.

COTTON is abundant and as cheap as at any point in America. We are close to the cotton fields of the South, and ought to be extensively engaged in manufacturing cotton goods. No place is or can be better situated for cotton mills.

HEMP.—Kentucky is a hemp growing State, and the article is as cheap and abundant here as any where else, this being one of the principal hemp markets of the country. Our facilities for manufacturing cordage, bagging, and rope can not be excelled.

TOBACCO.—We are in the midst of the greatest tobacco field of the Union, and the raw material to supply the manufactories of the world goes largely from Kentucky. If men *will* use the “weed,” there is no better place to manufacture it for them than Louisville.

CLAY, of superior quality for pottery and terra cotta works, is found in the immediate suburbs of the city. Articles as durable and fine as any we ever saw, both of stone ware and terra cotta work, are daily turned out from our shops.

In a word—metals, woods, fibrous materials, clay, and all other raw materials for manufacturing, are as abundant and as cheap here as at any other place in the western country.

POWER FOR MANUFACTURING.

Louisville is equal in facilities of this sort to any other city depending on steam to drive machinery, except Pittsburg and Wheeling, which are situated at the coal mines. Coal can always be had here as cheap as at Cincinnati; and if the mere question of dear fuel does not prevent her from being a great manufacturing city, as we know it does not, there is certainly no reason why Louisville should be an exception. It is a fact of which we are personally cognizant that Cincinnati has sold more steam engines, sugar mills, and other plantation machinery to the planters of the South, than Pittsburg and Wheeling both. And if our up-river neighbors have cheaper fuel, we have many other advantages which more than compensate us for the lack of this. But Louisville is not, or ought not to be, under any necessity of relying on steam power for manufacturing. She has water power equal to *four million horse power* running to waste over the Falls at the lowest stage of the Ohio river. She ought and may stand the first and most favored of manufacturing cities, so far at least as cheap power is concerned. It is to her shame that she has not turned this power to account. But we have said enough on this subject in the article on “Water Power.” The more we contemplate the subject of manufacturing the more do we see that nature peculiarly and eminently fitted this to be a place of vast manufacturing importance. In fact, we are amazed that it is not to-day the chief manufacturing city of the Ohio Valley. Nature evidently intended it should be, and has amply provided for it. We are, nevertheless, of the opinion that Louisville will become all she ought to be, and that the present dawning of new energy and new policy, so manifest among all classes of our citizens, mark the beginning of a new era in her manufacturing interests.

FUEL FOR MANUFACTURING AND DOMESTIC USE.

Coal has nearly taken the place of every other fuel, and will, doubtless, soon be universally adopted. We have coal in abundance in Kentucky, Indiana, Ohio, Virginia, and Pennsylvania—all accessible to Louisville. We have it on the Ohio, Kanawha, Big Sandy, Kentucky, Green, and Barren rivers, all navigable streams, and from most of which coal is brought to this market every season. The Louisville and Nashville Railroad runs immediately along the eastern edge of the great western coal field of Kentucky, which is only 50 to 60 miles distant from the city. We have every variety of bituminous coal. And from the report of Dr. Owen, the able State geologist, one is surprised at the number and value of the coals of Kentucky. Here is the hard, compact, oil bearing canel, the pure ebony slabs of which take a polish as smooth as a mirror, and may be obtained ten feet long, by three to four feet wide. So combustible is this coal that it may be kindled with a candle or a match. Here are many kinds of coking coals, running from the famous Pittsburg through a dozen other varieties, more or less valuable, and which are so important in manufacturing iron. As to quantity, the ablest geologists of Europe and America assure us in published documents, that it is inexhaustible. This indispensable article is as easily and abundantly obtained here as at any other city not absolutely situated on the usually poor lands immediately covering the coal strata.

The amount of coal annually consumed at this point is about 5,000,000 (five million) bushels, and the business is divided between twelve regular coal yards, giving employment to four hundred hands. The business has increased in the last ten years at the rate of ten per cent. per annum. Steam tugs are used to tow the heavy barges, and greatly facilitate the transportation of coal from the mines. The wholesale price of coal in this market is about $8\frac{1}{2}$ cents per bushel. Retail price $12\frac{1}{2}$ cents per bushel. These prices are for the best qualities, others are lower.

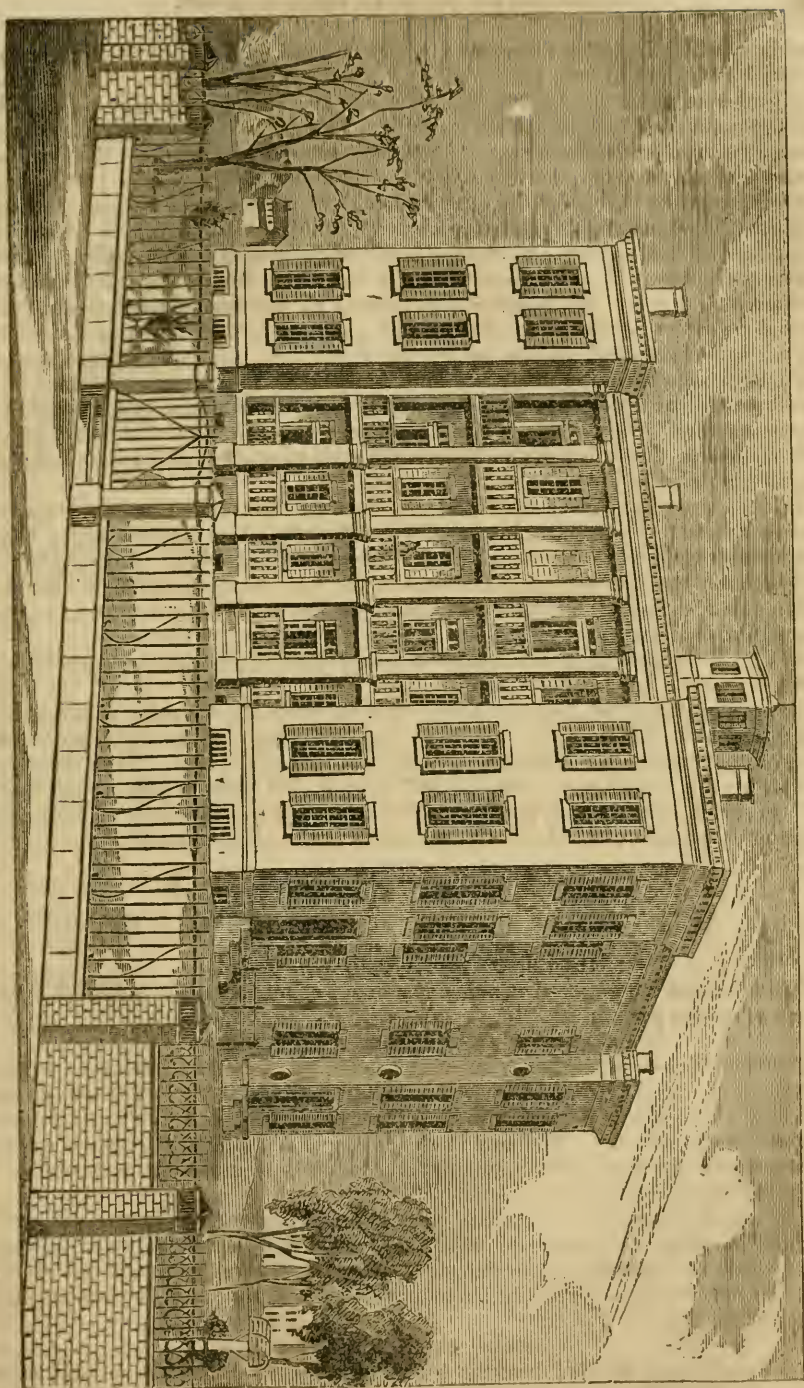
PORK PACKING AND PROVISION BUSINESS.

This branch of business was commenced in Louisville about twenty-eight years ago, but the first distinct notice we have of it is in the City Directory, 1844. There were then four pork houses, which could slaughter and pack about 70,000 hogs annually. In 1851 the number slaughtered amounted to 195,414. There are now eight packing and slaughtering houses in the city, employing 1260 hands during the packing season, and they slaughtered and packed this season 300,000 hogs. The capital employed in this branch of business at present is \$2,125,000, and the annual sales reach the sum of \$4,760,000. A most complete and well arranged establishment was built last season, and finished just in time to make a season's business the past winter. The magnitude and rapid increase of this branch of business, and the superior facilities of Louisville as a provision market, seem to require a more extended notice. We therefore lay the following description of one of our largest pork houses before the reader :

BEARGRASS PORKHOUSE.

"This is the most extensive packing establishment in the United States or in the world. No other concern has any thing near the same capacity for slaughtering, cutting, curing, packing, and storing the packed provisions. The capacity of the establishment stated in the number of hogs which can be slaughtered and packed in one season, may be fixed at 110,000, though the largest number that was ever slaughtered and packed was 105,000. The main

UNITED STATES MARINE HOSPITAL, HIGH STREET.



building, which includes the engine, slaughter, and cutting and packing rooms, is 335 by 110 feet in size, part three and part two stories high. The bulking and lard houses are 256 by 66½ feet, part two and part four stories high. The storage room is of 40,000 barrels capacity. The grounds in use for brine yard, pens, etc., etc., is twelve acres. The capital required to conduct the business varies with the season from \$500,000 to \$1,100,000. The season just closed, 1858-9, required the use of the largest sum—one million one hundred thousand dollars. The cash cost of the grounds and buildings is \$125,000. The property has been a paying one every season since erected. The distinguishing difference between the pork packing establishments at Louisville and Cincinnati is this: at Cincinnati the hogs are slaughtered in separate establishments, then hauled a mile or more to the cutting and packing houses, while in Louisville the whole is conducted by one party and under one roof. The advantages of the Louisville system are many and too manifest to require elucidation. The smoke-house is divided into four distinct fire-proof apartments, and is of 70,000 pieces capacity." Louisville is rapidly approaching the rank of the first provision market in the valley of the Mississippi, and provisions cured here are universally popular in the markets of the world.

Besides these immense establishments, there are four other large packing and curing houses. They cure, hog round, 2000 casks; lard 16,000 kegs; hams and shoulders equal to 2,000 casks. Two thousand beeves are also slaughtered and packed; and the aggregate business of the four houses is \$575,000 per annum. Besides these, there are a great many smaller establishments doing a large amount of business.

While on the provision business, we may appropriately notice the daily butchering by which our markets are supplied. There are 117 "boss" butchers. They employ \$202,040, and 218 hands in their business, exclusive of the wives, daughters, and sisters of the butchers, many of whom assist their husbands, fathers, and brothers in dispensing the daily rations of the city. They slaughter 23,078 beeves, 25,570 sheep, and 24,782 hogs in the year, besides a vast number of calves, lambs, and pigs, of which we took no account. Their sales amount to the sum of \$797,525, independent of the small animals.

WHOLESALE MERCANTILE HOUSES.

LEATHER, HIDES, AND FINDINGS.

Seven houses are engaged in this department of business, and sell \$1,500,000 worth of goods per annum.

SEEDS AND AGRICULTURAL IMPLEMENTS.

There are five exclusively agricultural houses, whose annual business amounts to \$400,000. This business has grown up within a few years, and is rapidly increasing. The city is becoming one of the most important agricultural centers in the western country. Situated in the center of the finest agricultural region of the world, she must always be the place where agricultural men, means, and interests "most do congregate."

The above houses do not include one of the immense manufactories of agricultural implements mentioned under that head. When we consider how rapidly these two branches of business have increased here, we feel proud of the position our city is assuming in the manufactory of agricultural implements and as a seed market.

HATS, CAPS, AND FURS.

This business is divided between six houses, whose aggregate annual sales amount to \$500,000.

GROCERIES.

There are forty wholesale groceries, whose aggregate annual sales amount to \$12,000,000. They import about 25,000 hogsheads of sugar, 25,000 barrels of molasses and sirups, 40,000 bags of coffee, and 10,000 packages of refined sugar.

DRY GOODS.

There are thirty houses, whose aggregate annual sales amount to \$9,000,000. Besides the business in the heavier staple goods, a large proportion of fine and fancy goods are sold here. Perhaps our wholesale merchants keep heavier stocks of rich fancy goods than any others in the West.

BOOTS AND SHOES.

Seven houses are engaged in this business, whose aggregate annual sales amount to \$1,500,000. If we add the wholesale business done by several of the large retail houses, we shall swell the sum to over two million dollars.

CLOTHING.

There are nine houses in this line of business, which sell \$1,500,000 per annum.

LIQUOR BUSINESS.

There are thirty houses in this business, which sell to the amount of \$1,000,000 a year.

HARDWARE.

Thirteen houses sell to the amount of \$850,000 a year. Besides these, many of the retail houses sell large amounts at wholesale.

DRUGS AND MEDICINES.

There are ten houses, whose aggregate sales amount to \$2,000,000 a year. Many of the retail stores also sell more or less at wholesale.

CHINA AND QUEENSWARE.

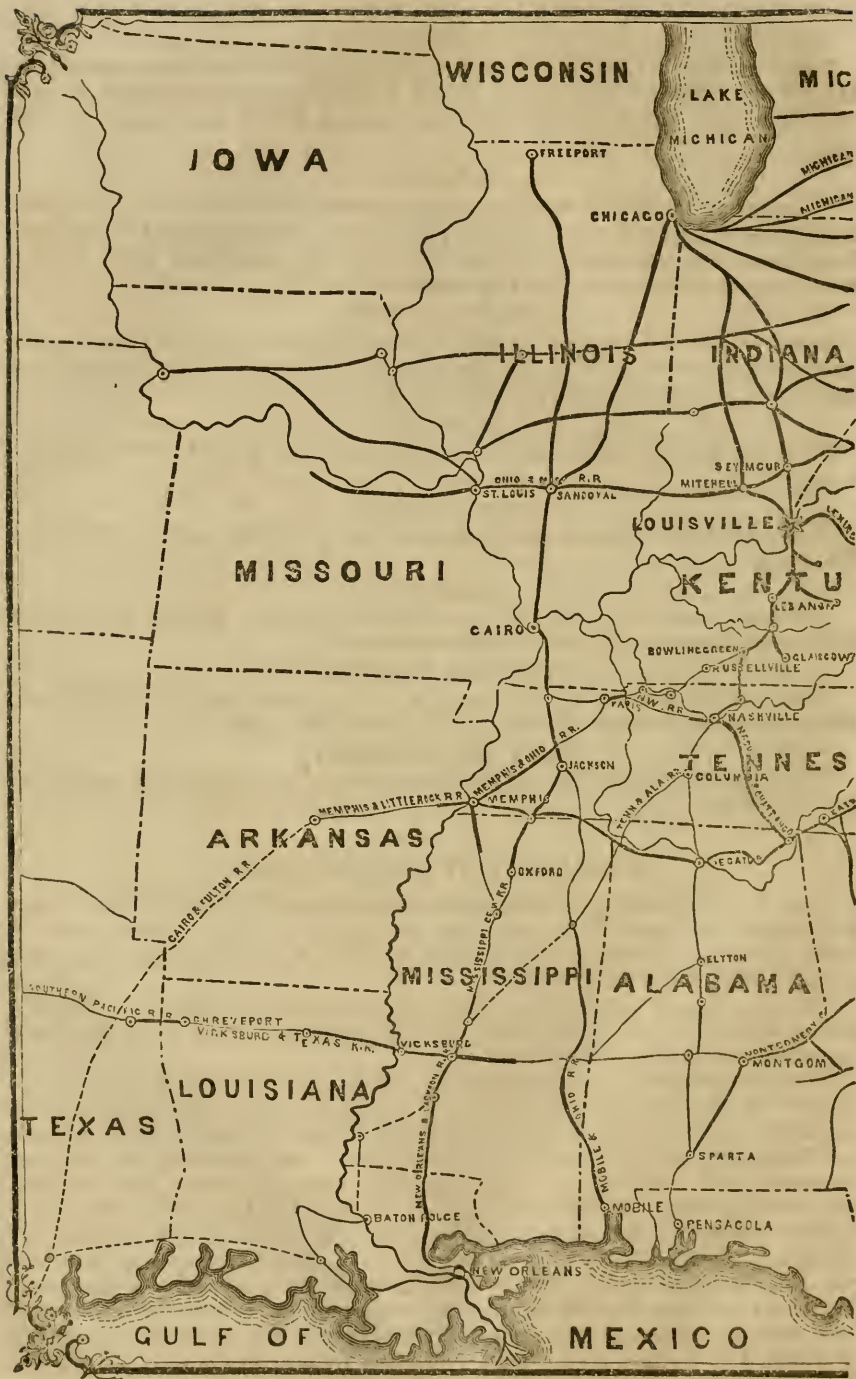
There are seven houses in this department, whose aggregate sales amount to \$300,000 a year.

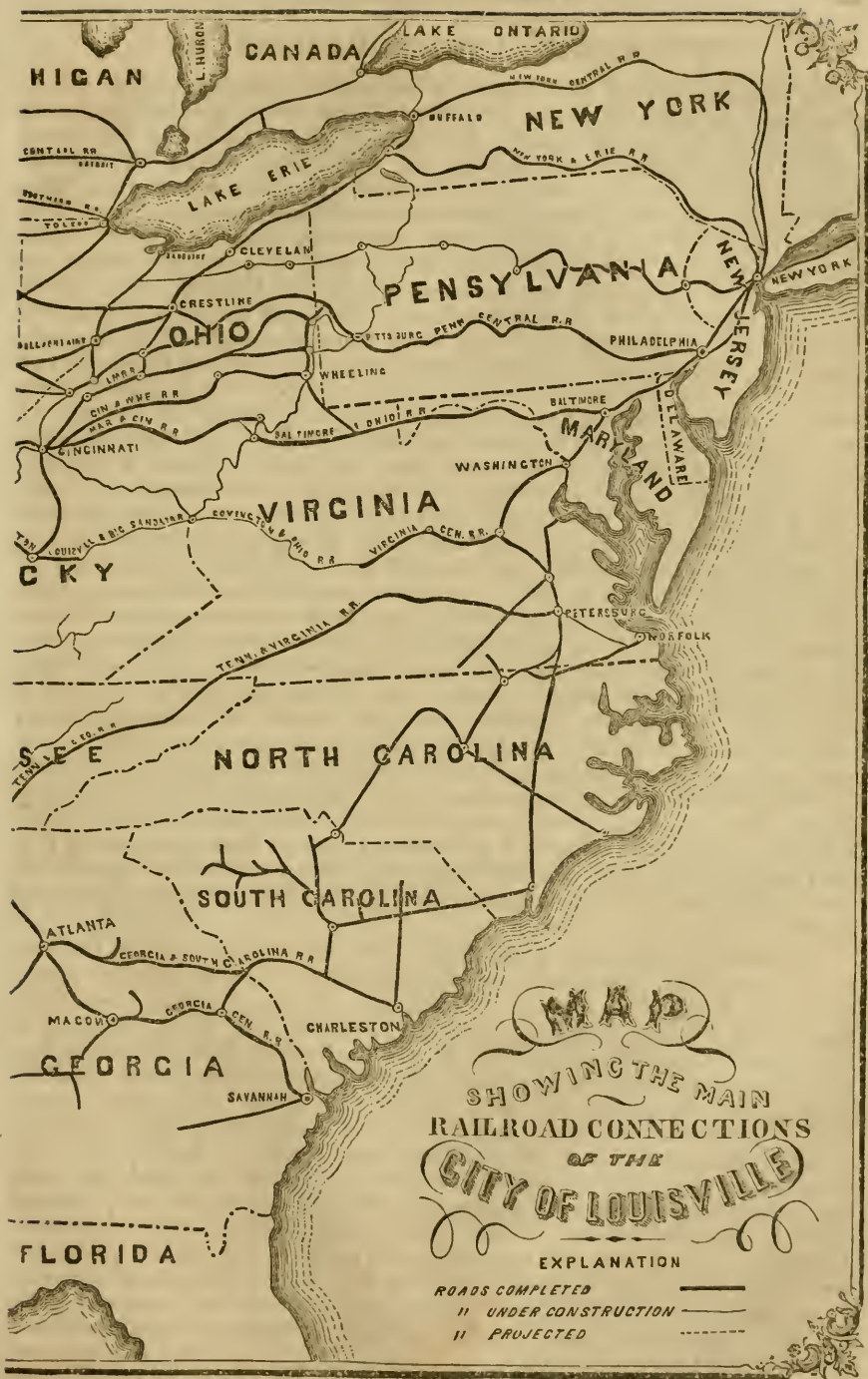
TOBACCO WAREHOUSES.

There are three very large ware houses for storing and selling tobacco. They have capacity to store 7000 hogsheads at one time. The aggregate sales of these houses for the year ending October 30, 1858, was 18,954 hogsheads, realizing for the whole over \$2,400,000.

The fees charged to farmers or shippers are only \$1 per hogshead. This includes storage and inspection, and all charges the purchaser pays, the whole amounting to \$1 25 per hogshead.

These three houses employ eight clerks, three overseers, and thirty-three laborers. With the single exception of New Orleans, this is the greatest tobacco market in the West, and the planters will find it the very best to realize the cash for their crops, and at the fullest prices without extra deductions for freights, insurance, and commission. There are daily sales at auction, and we have buyers from Cincinnati, Chicago, and all the lake cities, as well as buyers for foreign shipment. A large new stemmery has just been added to the long list of tobacco factories in the city. The business is annually increasing here, and the completion of the Louisville and Nashville Railroad and its numerous branches extending through the tobacco-growing region, together with the many and great advantages of this market, must accelerate the increase. Louisville is destined to be one of the most important tobacco markets in the United States.





TRANSPORTATION—RAILROADS.

We have already seen that Louisville has natural transportation on thirty-three rivers to fifteen States and three hundred and forty-six counties—having a population of 5,000,000 souls. We can not over-estimate the importance of these natural highways of transportation. But as our rivers do not reach the interior counties in every case, and as they can not cross mountains and hills, and at certain seasons are unavailable except to a limited extent, we are glad to be able to say that art has supplied what nature had failed to furnish. Thus the railroad system of the South, thousands of miles in extent, and that of the North, still more extensive, are connected together at Louisville by means of our great Louisville and Nashville Railroad. This road serves to give us the advantages of many roads, by placing us in connection with all those north, south, east, and west of us. There is, perhaps, no other road in the country of the length of this that serves to connect so many roads, or that commands so favorable a position between the northern and southern States of the Union. At this point it connects with two roads in Indiana, and through them with the whole system of roads north, east, and west. At Bowling Green it connects with the Memphis road, and through it with the whole south-west. At Nashville it connects with roads south, south-east, and east. Thus literally commanding the whole country in every direction. It will be seen by reference to the map that we have almost an air line road to New Orleans, and the same remark is true of the road to Mobile. Savannah and Charleston are nearer to us than to any other city in the Ohio valley, and, in fact, we are so situated in reference to them, that if we do not enjoy their entire trade in articles of Ohio valley produce, it will be simply and solely because we do not deserve to enjoy it. We shall soon be within eighteen hours of Memphis, and within forty of New Orleans, and, by our connection with the Mobile and Ohio road, within thirty-six hours of Mobile; we shall be within thirty-six hours of Savannah, within thirty-seven of Charleston, and about the same time from Richmond and Petersburg by the southern route as we are from Philadelphia by our present eastern routes. The necessities of the country will, before long, cause the Louisville and Lebanon road to be extended to Cumberland Gap, to form a connection with the Lynchburg and Knoxville Railroad. Thus giving a very short and eligible route to the interior of Virginia and to Norfolk, her best and most commodious harbor.

From the foregoing facts it will be seen that, besides having ready and easy access to some half dozen southern seaports, we shall soon be in daily communication with the whole interior of Mississippi, Alabama, Georgia, South Carolina, North Carolina, Virginia, Tennessee, and Florida. A vast majority of this great and wealthy country will be new territory to Louisville enterprise; not new or wild country to be settled hereafter, but old, wealthy, and populous country, just now, for the first time, thrown open to our business men. Long have they desired this business and social union as well as ourselves. Now let us show what we can do to deserve their intercourse and trade. Let every manufacturer put forth his efforts to draw them to our city, and use every honorable means to secure their large and increasing trade. Let every produce dealer hold out inducements to them to crowd our business houses with orders. Let each of these classes help the other to fill southern orders, until all our citizens exhibit one united effort to develop the mighty resources of our city. Thus shall a mighty tide of new business, new customers, and new prosperity flow into Louisville and make her what she ought to be—one of the finest manufacturing and commercial cities of the West. The prize is within our reach, let us grasp it.

CITY RAILROADS.

It is not our object to suggest new improvements so much as to mention those already made; yet as all persons have noticed the entire absence, until very recently, of all cheap modes of conveyance for passengers in the city, we deem it not improper to call attention to the subject. The neglect of this important matter for so long a time is the more surprising, as Louisville, owing to the vastness of the area covered in proportion to the number of her inhabitants, needs such facilities even more than other cities. With half the inhabitants, she covers more territory than some of the older cities of the country. While all are proud of our wide streets, large lots, and immense squares, which cover such a vast area, they can not but feel how indispensable to our comfort and convenience they make some *cheap public conveyance*. Lately the Louisville and Portland Railroad Company has extended a line of omnibuses on Main street as far up as Wenzel, thus stopping one mile short of the upper end of the city. This is all, and the only regular line of conveyance for passengers in the entire city, which is about six miles long by two and a half miles wide.

Shall we serve the usual apprenticeship of years in the use of the old, lumbering, dusty, crowded, and uncomfortable omnibus? or shall we at once profit by the experience of sister cities all over the country, and adopt the elegant, roomy, smooth-gliding rail-car? All are aware that the rail-car is taking the place of the "bus" in all other cities, and why should we begin wrong when it is just as easy to begin right? Sooner or later it must come to this, and if allowed to do so, there are parties now anxious to undertake the construction of street railroads, and furnish us at once with fine horse-cars, in which, for a mere nominal price, we, our wives and families, may glide through our long, wide streets as pleasantly as we can sit in our houses. Will it not enhance the value of property all over the city, and especially that remote from the business part of the city?

PERIODICALS.

DAILY PAPERS.—Louisville Journal, Louisville Democrat, Louisville Courier, Louisville Anzieger, Daily Evening Bulletin.

WEEKLY PAPERS.—Louisville Journal, Louisville Democrat, Louisville Courier, Presbyterian Herald, Western Recorder, Christian Union, Kentucky Family Journal, The Guardian, Turf Register, Commercial Advertiser.

SEMI-MONTHLY.—The Voice of Masonry, White's Reporter, Medical News.

MONTHLY.—Christian Repository, White's Counterfeit Detector.

BANKS.

Louisville has seven chartered banks, and we believe no similar institutions in the country stand higher in public estimation than they do. They are well guarded by judicious legislative enactment, and have been safely and well conducted for many years, until they have established a character of which our people may well be proud. These seven banks have an aggregate capital of \$5,310,000. Total banking capital in Kentucky \$13,030,000.

St. Louis has six banks with an aggregate capital of \$3,900,000. Total banking capital in Missouri \$7,050,600.

Cincinnati has two banks, with an aggregate capital of \$150,000. Total banking capital in Ohio \$5,413,746.

Pittsburg has seven banks, with an aggregate capital of \$4,200,700. Total banking capital in Pennsylvania, outside of Philadelphia, \$13,808,668.

Besides the seven chartered banks above, Louisville has five private banks, with largely over a million dollars capital. The business must be large where all this banking capital finds profitable employment.

The above statements are from official tables for 1858.

INDEBTEDNESS OF THE CITY OF LOUISVILLE UP TO MARCH 10, 1859.

27 Bonds to Lytle's heirs for their interest in wharf, due 1869,...	\$27,000 00
These bonds are to be paid by the Sinking Fund, which has the money now on hand, but the holders have refused for the past five years, to permit them to be redeemed, preferring to receive the interest.	
100 Bonds to Louisville Gas Co., due in 1867, for stock subscription,.....	\$100,000 00
These bonds have never been put in market, and will be entirely retired in 1863 by dividends on city's stock in Gas Co., and on dividends on stock dividends, the city having acquired additional stock of \$100,000 to this date, surplus dividend on her original stock of a like sum, after paying the interest on her bonds.	
75 Bonds to Trustees of Public Schools for erection of School Houses, due 1883,.....	\$75,000 00
These are to be paid by levying an annual tax upon the citizens for that purpose.	
200 Bonds to Jeffersonville Railroad, due 1882,.....	\$200,000 00
This is a loan of the credit of the city of Louisville to the Jeffersonville Railroad, the road having covenanted to pay the interest as it falls due, and the principal at maturity. By a resolution recently passed, the city has agreed to pay this interest for five years, by a tax of six (6) cents on the \$100 valuation.	
500 Bonds to Louisville and Nashville Railroad, due in 1883,....	\$500,000 00
The principal of these bonds is to be paid at maturity by stock dividends, and if insufficient then by the Sinking Fund, and the interest is now paid by that Fund, but heretofore by a special tax upon the city.	
175 Bonds to James Thompson, survivor, for purchase of wharf, due in 1884, ...	\$175,000 00
The principal and interest of the bonds are to be paid at maturity by the receipts of the wharves in the city of Louisville, and a lien on the property purchased.	
100 Bonds to Trustees of Public Schools for erection of school houses, due in 1884. Eighty-two of these bonds have been retired by Sinking Fund, and which is liable for the principal and interest of the residue,.....	\$18,000 00
1,000 Bonds to Louisville and Nashville Railroad, 750 due in 1886, and 250 due in 1887.....	\$1,000,000 00
This is nominally a subscription of stock, and is substantially also a loan of the credit of the city of Louisville to the Louisville and Nashville Railroad. The road has covenanted with the city, on and after the 1st of October, 1859, to pay all interest as it accrues and the principal at maturity. Until the 1st of October, 1859, the city pays the interest by a special taxation upon the real and personal property. This road is being rapidly pushed forward to completion; and being the only direct connecting railroad link between the North and South, it is believed, when completed, will be one of the best paying roads in the Union.	
225 Bonds to Lebanon Branch of Louisville and Nashville Railroad, due in 1886,.....	\$225,000 00

This is also a loan of the credit of the city of Louisville to the Lebanon Branch Road, said road covenanting to pay the interest and principal as they respectively fall due, the performance of the covenant being secured by a first mortgage on the road, and all its franchises, effects, etc. This Branch Road, 37½ miles in length, is completely finished, equiped, and in full operation, (making money) and there can be no question of its ability to perform its covenant.

300 Bonds to Louisville and Frankfort Railroad, due at different dates, the last in 1881,..... \$300,000 00

By a contract dated Nov. 20, 1854, between the city and the Louisville and Frankfort Railroad, the latter covenanted to retire the principal and interest of these bonds as they respectively fell due, which covenant was secured by a first mortgage upon the road and its appurtenances. The company have retired \$100,000, and have a large sinking fund applicable to the payment of this indebtedness. Passing through the richest portions of Kentucky, and connecting with the Cincinnati, Covington, and Lexington Road, at Lexington, thus making a direct communication with the Eastern Railroads, it is one of the best paying roads in the West, and there can be no doubt of its ability to pay the principal and interest of these bonds as they mature.

672 Bonds to the Louisville Water Company for subscription to stock, due in 1887,..... \$672,000 00

The interest upon these bonds is secured by an irrevocable tax levied annually, upon the real and personal estate in the city of Louisville, and the principal secured by a mortgage by the city of Louisville to the commissioners of the Sinking Fund of said city, of her entire stock and the dividends thereon in said Water Company.

3,292 Bonds, aggregating the sum of.....\$3,292,000 00

RECAPITULATION.

Contingent Indebtedness of the city of Louisville.

Bonds to the Gas Co.,.....\$100,000 00
 " Jeffersonville Railroad,.....\$200,000 00
 " Louisville and Nashville Railroad, due in 1886
 and 1887,.....\$1,000,000 00
 " Lebanon Branch of the Nashville Road,.....\$225,000 00
 " Louisville and Frankfort Railroad,.....\$300,000 00

\$1,825,000 00

Positive Indebtedness of the city of Louisville.

Bonds to Lytle's heirs,.....\$27,000 00
 " Trustees of Public Schools,..... 75,000 00
 " Louisville and Nashville Railroad, due in 1883, 500,000 00
 " James Thompson,.....175,000 00
 " Trustees of Public Schools, ... 18,000 00
 " Louisville Water Co.,.....672,000 00

\$1,467,000 00

Total,.....\$3,292,000 00

Assets of the city of Louisville.

Real Estate,.....	\$1,055,703 56
Stock in Gas Co.,.....	200,000 00
“ Jeffersonville Railroad Co.,.....	200,000 00
“ Louisville and Nashville Railroad,.....	1,500,000 00
“ Lebanon Branch Road,.....	225,000 00
“ Water Company,.....	550,000 00
Mortgage on Louisville and Frankfort R. R.,.....	300,000 00

\$4,030,703 56

Sinking Fund of the city of Louisville.

This Fund was created by the new charter of the city of Louisville, which took effect 24th March, 1851. It was created for the purpose of discharging the *then* existing indebtedness of the city, which amounted to upwards of \$300,000, to which was added the indebtedness of the town of Portland, on 6th September, 1852, amounting to upwards of \$70,000, all of which old indebtedness has been paid off by said Fund, except the \$27,000 due to Lytle's heirs. There are ample means in the Fund to pay that, but the holders of the bonds have refused for the past five years to permit them to be redeemed, preferring to receive the interest.

The resources of the Sinking Fund are derived from licenses and the proceeds of market houses and wharves, and yield a net income to the city of about \$115,000 per annum, and increasing largely and steadily, which will be devoted to the payment of the indebtedness of the city, and will, of itself, afford ample means to pay all the bonds the city has issued before they respectively fall due.

This Fund has, as before stated, paid a large indebtedness, as follows :

65 Bonds held by Bank of Kentucky,.....	\$65,000 00
40 “ to Lexington and Ohio Railroad,.....	200,000 00
5 “ to Lytle's heirs,.....	5,000 00
1 “ to Mrs. Catharine Aringer,.....	5,000 00
82 “ to Trustees of Public Schools,.....	82,000 00
Bonds and debts of town of Portland,.....	36,726 00

Total bonded debt retired,..... \$393,726 00

And has invested in 6 per cent. bonds as follows, viz.:

40 Louisville and Nashville Bonds,.....	\$40,000 00
25 “ Water Bonds,.....	25,000 00

Total investment,..... \$65,000 00

Total debts retired and investment,..... \$458,726 00

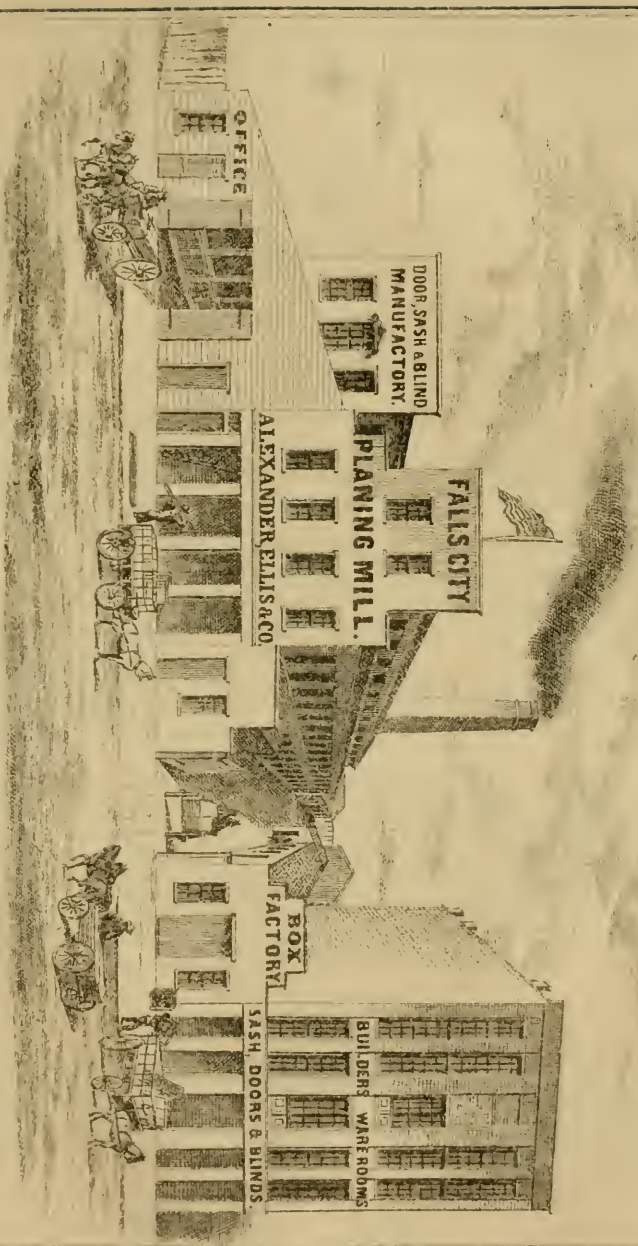
This is exclusive of the amount of interest paid by Sinking Fund on bonds chargeable upon it, the erection of five market houses, and the repairs and making of wharves at Portland, Middle City, and Strader purchase, the repairing of the old Court-house, amounting, to date, to \$40,975. In the whole, the additional sum of \$200,000, or thereabouts.

Assessed Value of the Taxable Property of the city of Louisville.

The assessed value of the taxable property of the city of Louisville for the year 1858, amounted to the sum of \$34,000,000.

The city has taken stock or loaned her faith and name to the following enterprises, viz.:

The Gas Company by bonds for stock,.....	\$100,000 00
The Lexington and Ohio Railroad by bonds (dead loss),.....	200,000 00
The Louisville and Frankfort Railroad by bonds, (loan of faith)	300,000 00



Fulton St. Fronting the River, above Preston St.

LOUISVILLE, KY.

First Manufacturer to work Lumber into the River

The Jeffersonville Railroad by bonds, (loan of faith).....	200,000 00
The Louisville and Nashville Railroad by bonds and cash for stock and loan of faith,.....	2,000,000 00
The Lebanon Branch Railroad by bonds, (loan of faith).....	225,000 00
The Louisville Water Co. by bonds for stock issued \$672,000 to realize.....	550,000 00

Total aid already given..... \$3,575,000 00

And ordinances have passed the council, and approved by the people, to aid by bonds the Memphis Branch of the Nashville Railroad,..... \$300,000 00

The Water Company by bonds for additional stock,..... 220,000 00

Aid proposed..... \$520,000 00

Total aid..... \$4,095,000 00

BENEVOLENT INSTITUTIONS.

ORPHAN ASYLUMS.

There are six orphan asylums, four Protestant, and two Roman Catholic. These institutions are well arranged and cared for, and do much to bless the fatherless and motherless.

PUBLIC HOSPITALS.

There are two public hospitals, one belonging to and sustained by the city, the other was built and is sustained by the Federal Government. Both are well provided with every comfort for the sick and disabled. Besides the above there are several private hospitals and infirmaries.

There is a city alms house, a fine building, with spacious grounds, and a large school for the poor children connected therewith. Also a pest house, with premises, for the reception and treatment of small pox patients.

BLIND ASYLUM.

The institution for the blind, built and sustained by the State, is just beyond the eastern city limits, on a beautiful eminence, which commands a fine view of the city and of the country for miles around. It is a large and handsome building, four stories high, and well furnished with every convenience for the inmates. The blind are taught to read and some of them are good Latin scholars, and understand geography, music, and other arts and sciences. They also learn various kinds of handicraft, both useful and ornamental, by which they may make a living after they quit the Institution.

CHURCHES.

There are fifteen Methodist, six Baptist, five Presbyterian, five Lutheran, five Protestant Episcopal, two Christian, one Cumberland Presbyterian, one Associate Reformed, one Unitarian, one Universalist, two Jewish Synagogues, and five Roman Catholic Churches. Many of these buildings are fine specimens of architectural elegance and beauty, while others are convenient but unpretending.

SABBATH SCHOOLS.

There are 43 Sunday-schools, taught by 675 teachers, and having in them 4,000 children. Besides these there are eight Sunday-schools for colored children, having 775 children and 96 teachers. Total 51 Sunday-schools, 671 teachers, and 4775 scholars.

CEMETERY.

Cave-hill cemetery is very handsomely laid out, and highly improved with nearly every variety of ornamental tree, shrub, and flower. The ground being naturally undulating and beautifully diversified, affords opportunity for every form and style of ornamental design, and these have been conceived and executed by Mr. Ross, whose taste and experience are of the first order, until the eye of the visitor is surprised and charmed at the multitudinous forms of beauty around him. The monuments, too, are strikingly appropriate and beautiful, and some of them are quite costly structures. Taken as a whole, we do not recollect to have seen a more beautiful cemetery any where. There are other smaller cemeteries of some note, as the Eastern or Wesleyan Cemetery, and the Western Cemetery. Cave-hill Cemetery contains nearly one hundred acres.

MASONIC FRATERNITY.

Masonic Temple, corner Jefferson and Fourth streets. The order in the city is thus represented: Grand Consistory of Kentucky; Louisville Encampment, No. 1; Louisville Council, No. 4; Louisville Royal Arch Chapter, No. 5; King Solomon's Chapter, No. 18; Abraham Lodge, No. 8; Clark Lodge, No. 51; Mt. Moriah Lodge, No. 106; Antiquity Lodge, No. 113; Mt. Zion Lodge, No. 147; Compass Lodge, No. 293; Willis Stewart Lodge, No. 224; St. George Lodge, No. 239; Tyler Lodge, U. D.; Lewis Lodge, (Portland) No. 191; Excelsior Lodge, No. 258; Robinson Lodge, No. 266; Preston Lodge, No. 281.

I. O. O. F.

The Hall is on Jefferson street, between First and Second. There are twelve Subordinate Lodges in the city, viz.: Boone No. 1; Chosen Friends No. 2; Lorain No. 4; Herman No. 17; Azur No. 25; Marshall No. 29; Eureka No. 36; Fonda No. 48; Schiller No. 60; Corinthian No. 74; Louisville No. 81; Portland No. 138.

These Lodges have an aggregate membership of 1301. The Grand Lodge of Kentucky meets annually in the city of Louisville. There are four degree Lodges and four Encampments.

The annual receipts from the Subordinate Lodges in the city for 1858 were.....	\$11,300 61
The annual receipts from the Encampments for 1858 were.....	1,099 51
Total revenue in the city,.....	\$12,400 51
Amount expended for relief of brothers and patriarchs in the city.....	\$3,813 87
For relief of widowed families.....	669 00
“ Education of orphans,.....	193 35
“ Burying the dead.....	909 40
Total amount expended....	\$5,585 62

FIRE DEPARTMENT.

The Fire Department of Louisville is as thoroughly organized and as efficient as that of any city in the Union. It consists of five steam engines, with all the necessary appurtenances—employs 65 men and 23 horses, and costs the city \$21,702 86 per annum. The number of fires has decreased more than three-fourths under the new organization, and the loss of property is less than one-eighth.

COMPARATIVE STATEMENT

Of Rates of Taxation, Licenses, Salaries of Officers, &c., in the Cities of St. Louis, Chicago, Pittsburgh, Cincinnati, Nashville, New Albany, and Louisville.

CITIES,	Population in 1858.	TAX LEVIED ON \$100 FOR CITY, COUNTY, AND STATE.							Value Ground	No. Po-lice.	Total Salaries Police.	Mayors' Salary.	Total Salaries City Officers.	Total Salaries Office s & Police.		
		City.	School.	Water.	Gas.	Wharf Railrd.	Total.	Co. & State.							Gr. Total.	
St. Louis.....	150,000	105	.....	.....	.....	05	.....	\$1 10	\$1 25	\$2 35	\$2000	172	\$107,600	\$3000	\$42,400	\$150,000
Chicago	110,000	130	20	.....	20	.....	1 70	33	2 03	.....	1500	133	94,168	3500	33,700	127,868
Pittsburgh	55,000	50	40	65½	.....	.....	1 55½	80	2 35½	.....	1000	50	21,130	700	10,550	31,680
Cincinnati.....	225,000	.....	.....	.....	.....	.....	91	.....	.....	.....	.....	123	69,288	2000	50,815	129,103
Nashville.....	20,000	105	20	.....	.....	28	1 53	26	1 79	.....	900	20	14,135	1000	6,060	20,195
New Albany	17,000	125	10	.....	.....	.....	1 35	72	2 07	.....	250	6	3,735	900	2,750	6,485
Louisville.....	70,000	100	05	10	10	.....	1 45	20	1 45	.....	900	41	34,980	2000	24,350	59,330

In St. Louis, in addition to the taxes levied, there is a special sewer tax of 50 cents on the \$100 in the sewer district, making a total of taxes paid in that district of \$2 85 on the \$100.

In Pittsburgh, in addition to the regular pay of the police officers, they are allowed 75 cents for each arrest made. That city also taxes merchants one-third of a mill on the dollar for all goods sold, in addition to the taxes and license charged on stores.

In the city of Nashville, the police officer making an arrest is allowed the sum of \$1 in addition to the regular pay. That city charges retail stores, in lieu of a regular license, the sum of \$5 on the \$1000 worth of goods, and all stores pay a fee of \$1 to the Mayor and \$1 to the Recorder.

The Mayor of Pittsburgh receives about \$2,300 in fees, in addition to his salary, and the Treasurer about \$800 in fees, outside of his salary.

In the city of Cincinnati, there is a special tax levied to pay for lights on the property fronting streets lighted by gas. Also, a special tax levied for the improvement of streets. Neither of those special taxes, nor the State and County levy, are given by the report from that city, nor included in this statement.

This statement is compiled from the letters of the respective cities, in answer to interrogatories from the Mayor of Louisville, and can be relied on as correct. The answers from all of the cities are full and explicit, save from Cincinnati, and the data relative thereto is taken from the report forwarded by the Auditor.

FALLS CITY

REAL ESTATE AND COLLECTING AGENCY.

RICHARD DEERING.

DRUMMOND WELBURN.

DEERING & WELBURN,

Real Estate and Collecting Agents,

Corner Third and Jefferson Sts., Old Postoffice Building,

LOUISVILLE, KENTUCKY,

Will attend to buying and selling Real Estate, renting Dwelling and Business Houses, and all the business of a general Collecting Agency.

To persons desirous of transacting business through reliable Agents, on fair and honorable principles, we respectfully offer our services. An extensive acquaintance in Louisville, New Albany, and Jeffersonville, and the adjacent regions of country, gives us admirable facilities for conducting successfully the business in which we are engaged.

The Cities at the Falls of the Ohio present at this time extraordinary attractions to all classes of people. Their rapid growth offers the mechanic constant employment and good wages; their vast capital, unlimited water power, and home market, invite the manufacturer to set his machinery in operation. The mercantile community know that fewer failures take place here than in any other city of one hundred thousand inhabitants in this country. The capitalist will here find property at very reasonable prices, with a certain prospect of rapid advance. Good health, pure water, public and private schools of the highest order, excellent society, &c., invite those in search of a pleasant home to locate here.



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